

What stocks are the missile stocks?

(Page 109)

I
N
D
E
X

- 175
- 150
- 125
- 100
- 75
- 50
- 25
- 0

BUSINESS WEEK

A MCGRAW-HILL PUBLICATION

FIFTY CENTS

DEC. 21, 1957



Donald J. Scholz' splashy new kind of merchandising plan for the sagging housing industry is built around his Mark '58 prefab (Marketing)

US BR
UNIVERSITY MICROFILMS
313 N 1ST ST
ANN ARBOR MICH
C 8-7



How to make a brand weigh more

TO THE MAN with a taste for thick, juicy steaks—or the rancher who stakes his brand and reputation on the beef he ships to market, here is news . . .

Beef cattle are growing bigger and healthier now, with the help of Shell Chemical's new fertilizers applied to rangeland. Growth of grass and clover is *doubled* because of this new concept in beef production, developed by university and government researchers.

Forage grows earlier, faster, richer. And better grass naturally grows better steers. More profitably, too. Shell's pioneering tests have already shown that fertilizer costs can be repaid threefold when the fattened cattle reach market.

Next time you sink your teeth into an unusually tasty steak, remember that this may have come about because Shell helped Nature do her job better.

Shell Chemical Corporation

Chemical Partner of Industry and Agriculture

SAN FRANCISCO



GENERAL BUSINESS

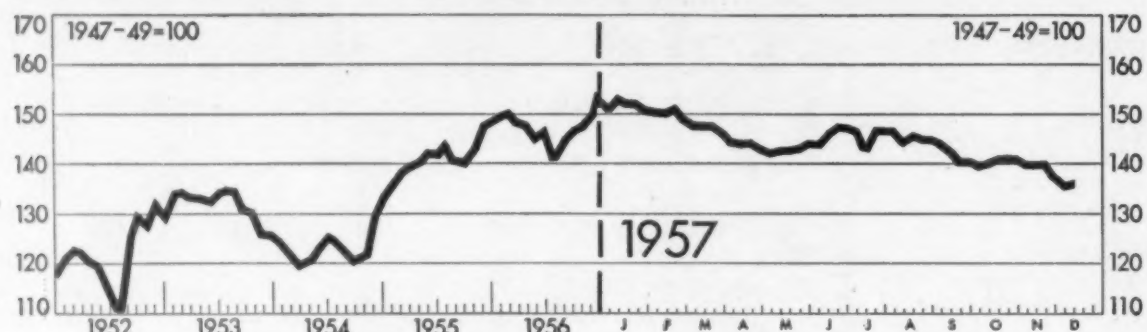
	Page
BUSINESS OUTLOOK	11
WASHINGTON OUTLOOK	31
INTERNATIONAL OUTLOOK	97
PERSONAL BUSINESS	117
THE TREND	128
FIGURES OF THE WEEK	2
CHARTS OF THE WEEK	124
READERS REPORT	5

NATO FALLS SHY OF U. S. HOPES. But despite disappointment on the plan to stock West Europe with IRBMs, the alliance holds firm.....	15
UNEMPLOYMENT BOILS UP A HOT ISSUE FOR CONGRESS. Four-million jobless by January will mean noisy demands for action.....	18
AS ATLAS BLASTS OFF, CONGRESS PUSHES ITS PROBE. The result: wide revelations on where the U. S. stands in defense.....	20
WESTINGHOUSE TRIES THREE-MAN RULE. Company has new president, Mark Cresap, and a new managerial philosophy.....	22
IS TEXAS OIL EMPIRE UP FOR SALE? Sid Richardson denies he's selling out, but several oil companies are showing a lot of interest.....	22
STEEL TAKES A HITCH IN ITS BELT. But 1958 doesn't look so bad as it might have been.....	24
LONDON'S BANK RATE FUSS. News of the rate increase leaked out. Did Bank of England directors benefit through their private firms?.....	26
IN BUSINESS. News about unexpected jump in C-of-L index, perk-up in New York's retail sales, du Pont's overriding patent for hot new plastics.....	28

THE DEPARTMENTS

BUSINESS ABROAD:	Nestle Bolsters Its Outposts. Giant Swiss food producer is pushing \$60-million expansion program	68
	Selling U. S. Advice to Europe. It's big business for management consultants.....	74
	In Business Abroad	79
EDUCATION:	Teaching Men Their Place in the Kitchen. New Haven cooking school starts them on the way to well-paid jobs as cooks and chefs—a labor scarcity field.....	120
FINANCE:	Shaking Out Weaklings. Bankruptcies have been rising, as usual in boom times... ..	38
	Wall Street Talks	40
GOVERNMENT:	In Washington. News about extension of oil import curbs, GSA's shortage of bidders, an FTC test for the testers, talks on atom power, foreign trade.....	67
INDUSTRIES:	And This Market May Last. Coal exports are booming now.....	35
	Detroit Styling for Smart Set . . . and Designs for Small Fry, Too. There's a new trend in boat building.....	37
LABOR:	Teamsters' Fate Hangs on Trials. Outcome of Hoffa's legal difficulties is key to union's future	101
	Big Money in Fringe Benefits	102
	How Unions Have Fared Since the Merger. AFL-CIO has added almost 1-million to its membership in two years.....	104
	In Labor	106
MANAGEMENT:	In Management	55
	Directors Peer Into the Mirror	57
MARKETING:	In Marketing	45
	Selling a House Coast to Coast. Prefabber Scholz (cover) is readying the housing industry's biggest merchandising effort.....	46
	The Marketing Pattern. Detroit doubts its dogmas.....	52
THE MARKETS:	There's Magic in Missiles. But not all the stocks that are doing so well in the markets have a real claim to the name of missile shares.....	109
	In the Markets. News about stock doldrums, bond advance, margins, how mutual funds stand, uranium in the doghouse.....	114
NEW PRODUCTS:	A Bus That Soothes the Psyche. Mack Truck says passengers feel more secure in new intercity vehicle designed for Greyhound, thanks to bumpers, tail fins.....	80
PRODUCTION:	Jets in Economy-Size Packages boast vastly more thrust for their weight.....	82
	Muffler for a Jet. Boeing to use noise husher.....	88
RESEARCH:	Hard Road to an ICBM Defense. Finding way to stop an ICBM may be key to supremacy in Space Age, but it's a tough one.....	91

FIGURES OF THE WEEK



BUSINESS WEEK INDEX (chart)

1946 Average	Year Ago	Month Ago	Week Ago	§ Latest Week
91.6	155.4	140.2	†136.3	*136.5

PRODUCTION

Steel ingot (thous. of tons).....	1,281	2,525	1,945	†1,770	1,739
Automobiles and trucks.....	62,880	195,168	173,382	†167,761	174,593
Engineering const. awards (Eng. News-Rec. 4-wk daily av. in thous.).....	\$17,083	\$73,264	\$53,213	\$49,501	\$46,603
Electric power (millions of kilowatt-hours).....	4,238	12,220	11,953	12,315	12,570
Crude oil and condensate (daily av., thous. of bbls.).....	4,751	7,355	6,831	6,850	6,884
Bituminous coal (daily av., thous. of tons).....	1,745	1,773	1,567	1,618	1,512
Paperboard (tons).....	167,269	281,309	290,265	258,322	288,876

TRADE

Carloadings: miscellaneous and L.C.I. (daily av., thous. of cars).....	82	72	65	62	60
Carloadings: all others (daily av., thous. of cars).....	53	51	47	43	43
Department store sales index (1947-49 = 100, not seasonally adjusted).....	90	226	135	†159	215
Business failures (Dun & Bradstreet, number).....	22	249	306	287	269

PRICES

Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100).....	311.9	439.4	386.6	391.1	393.0
Industrial raw materials, daily index (BLS, 1947-49 = 100).....	††73.2	100.2	84.8	84.4	84.6
Foodstuffs, daily index (BLS, 1947-49 = 100).....	††75.4	82.6	84.2	85.4	85.0
Print cloth (spot and nearby, yd.).....	17.5¢	19.0¢	17.5¢	17.8¢	17.8¢
Finished steel, index (BLS, 1947-49 = 100).....	††76.4	168.8	181.7	181.7	181.7
Scrap steel composite (Iron Age, ton).....	\$20.27	\$64.50	\$32.67	\$32.00	\$32.00
Copper (electrolytic, delivered price, E & M, lb.).....	14.045¢	35.955¢	26.860¢	26.735¢	26.540¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$1.97	\$2.34	\$2.21	\$2.21	\$2.17
Cotton, daily price (middling, 1 in., 14 designated markets, lb.).....	**30.56¢	33.14¢	34.55¢	34.91¢	34.94¢
Wool tops (Boston, lb.).....	\$1.51	\$2.20	\$1.90	\$1.85	\$1.85

FINANCE

500 stocks composite, price index (S&P's, 1941-43 = 10).....	17.08	46.51	39.92	40.96	40.04
Medium grade corporate bond yield (Baa issues, Moody's).....	3.05%	4.37%	5.09%	5.08%	5.02%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate).....	¾-1%	3% %	4% %	3% %	3¾-3% %

BANKING (Millions of Dollars)

Demand deposits adjusted, reporting member banks.....	††45,820	58,266	55,025	55,389	56,630
Total loans and investments, reporting member banks.....	††71,916	86,473	86,103	86,858	87,386
Commercial and agricultural loans, reporting member banks.....	††9,299	30,811	31,836	†31,573	31,813
U. S. gov't guaranteed obligations held, reporting member banks.....	††49,879	25,884	24,785	25,619	26,630
Total federal reserve credit outstanding.....	23,888	26,633	25,424	25,387	25,617

MONTHLY FIGURES OF THE WEEK

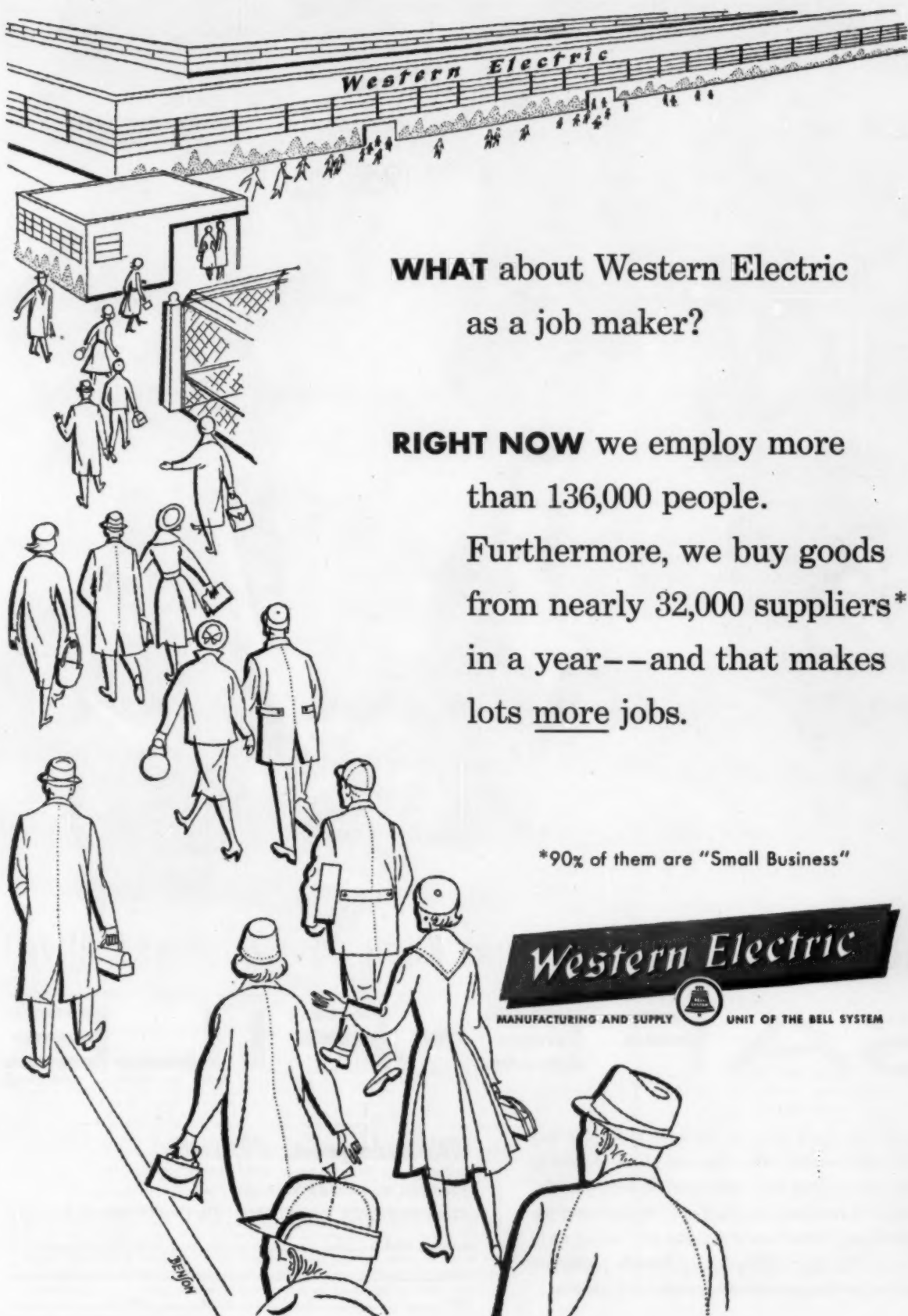
	1946 Average	Year Ago	Month Ago	Latest Month	
Cost of living (U. S. Dept of Labor BLS, 1947-49 = 100).....	November	83.4	117.8	121.1	121.6
Wholesale prices (U. S. Dept of Labor BLS, 1947-49 = 100).....	November	78.7	115.9	117.8	118.0
Personal income (seasonally adjusted, in billions).....	November	\$178.0	\$334.9	\$345.9	\$345.4
Farm income (seasonally adjusted, in billions).....	November	\$16.9	\$15.6	\$14.9	\$14.9
Bank debits (in millions).....	November	††\$85,577	\$185,223	\$204,168	\$189,246

* Preliminary, week ended December 14, 1957.
† Revised.

†† Estimate.
** Ten designated markets, middling 1½ in.

§ Date for 'Latest Week' on each series on request.

THE PICTURES—Boeing Airplane Co.—91; Bristol-Myers Co. 62 (top); Grant Compton—82, 84; Fort Worth Star-Telegram—23; Georg Gerster—68, 71; Herb Krotovil—18, 120, 121, 122; Mack Trucks, Inc.—80; Marine Historical Assn., Inc.—5; Russell Melcher—15, 16, 17; Charles Nelson of Westinghouse—22; Northrop Aircraft, Inc.—83 (bot. rt.); Tom O'Reilly—cover, 46, 47; Robert Phillips—20 (rt.), 21; Standard Oil Co. (Ohio)—62 (bot.); Howard Staples—37; Vertol Aircraft Corp.—83 (top & bot. lt.); W.W.—20 (lt.), 26, 29, 101.



WHAT about Western Electric
as a job maker?

RIGHT NOW we employ more
than 136,000 people.
Furthermore, we buy goods
from nearly 32,000 suppliers*
in a year--and that makes
lots more jobs.

*90% of them are "Small Business"

Western Electric

MANUFACTURING AND SUPPLY



UNIT OF THE BELL SYSTEM



protect the vital records that keep your business alive!

SAFE-FILE[®]

Vital! That's the word for your accounts receivable and other accounting records. Why? Because you need them to prove your loss—collect your insurance. So don't gamble! Protect them in certified, "point-of-use" equipment from Remington Rand. More than 200 styles and variations to choose from. For full particulars on records protection equipment tailored to your specific needs, send coupon.

Remington Rand

DIVISION OF SPERRY RAND CORPORATION
ROOM 2203, 315 FOURTH AVENUE, NEW YORK 10

Please send FREE folder SC782, "The Cost Of Burned Records."

NAME & TITLE _____

FIRM _____

CITY _____ ZONE _____ STATE _____

EDITOR & PUBLISHER Elliott V. Bell

MANAGING EDITOR Kenneth Kramer

ASSISTANT MANAGING EDITOR Robert B. Colborn

ASSOCIATE MANAGING EDITORS John L. Cobbs, Peter French, Eugene Miller

SENIOR EDITORS

Clark R. Pace, Howard Whidden

DEPARTMENTS

Business Outlook: Clark R. Pace, *Editor*; Sam I. Nakagawa
Economics: Leonard Silk, *Editor*
Finance: William McKee Gillingham, *Editor*; Albert C. Lasher
Foreign: Howard Whidden, *Editor*; Sol Sanders, Paul Finney
Industrial Production: Theodore B. Merrill, Jr., *Editor*; C. Peter Buckley, William L. Smith
Labor: Edward T. Townsend, *Editor*; Thomas R. Brooks
Management: Lee Geist, *Editor*; Edward McCreary
Marketing: Richard L. Waddell, *Editor*; Cora Carter, Jack E. Patterson
Money & Credit: M.J. Rossant, *Editor*
Personal Business: Joseph L. Wiltsee, Marilyn Holmes
Regions: Werner Kenberg, *Editor*
Research: Jane H. Cutaia, *Editor*
Statistics: Elsa Denno
News Editors: T. B. Crane (*Senior News Editor*), Jeanne A. Bernhardt, Robert F. Deed, John A. Dierdorff, Lawrence H. Odell, Doris I. White
Staff Writers: John H. Maughan
Editorial Assistants: Mary T. Beckerle, Edward J. Burgess, Jr., Jean Drummond, John Hudor, Kathleen Kundel, Irwin Lainoff, Ann Woods
Illustration: Richard A. Wolters, *Editor*; Robert Isear, *Pictures*; Grant Compton, Jack H. Fuller, Herbert F. Kravitz, Jomary Mosley, Arthur Richter, Joan Sydlow
Library: Jane G. Racza, *Librarian*
Assistant to the Editor and Publisher: Gerald W. Schroder

McGraw-Hill Economics Staff

Dexter M. Keezer, *Director*; Theodore C. Boyden, William H. Chartener, Douglas Greenwald, Robert P. Ulin

U.S. & Canadian News Service

Atlanta Bureau: Glenn McCullough, *Manager*; Frances Ridgway
Boston Bureau: Brenton Welling, Jr., *Manager*; Lucie Adam
Chicago Bureau: Merlin H. Mickel, *Manager*; Franklin N. Karmatz, Joanne Sponsler
Cleveland Bureau: John K. Fockler, *Manager*; Michelle Perry
Detroit Bureau: William Kroger, *Manager*
Houston Bureau: Normand DuBeau, *Manager*
Los Angeles Bureau: Thomas M. Self, *Manager*; James P. Roscow, Margaret W. Hayes
Milwaukee Bureau: Keith G. Felcy, *Manager*; Kathleen C. Horan
Philadelphia Bureau: W. B. Whichard, Jr., *Manager*; Esther A. Schulz
Pittsburgh Bureau: Richard N. Larkin, *Manager*; George W. New, Elinore S. Thomas
San Francisco Bureau: Richard Lamb, *Manager*; Margaret J. Scandling
Toronto Bureau: John D. Harbron, *Manager*; Jean Ross-Skinner
Washington Bureau: George B. Bryant, Jr., *Manager*; Alan E. Adams, Glen Bayless, Roy Calvin, Ernest Conine, John C. L. Donaldson, Jay Flocken, Boyd France, Sam Justice, Arthur J. Kraft, Donald O. Lomis, Gladys Montgomery, Arthur L. Moore, Seth Payne, Morton A. Reichel, V. Craig Richter, Caroline Robertson, Vincent Smith

McGraw-Hill News Service

Manager: John Wilhelm; **Beirut:** O. M. Marashian; **Bonn:** Morrie Helitzer, Thomas Berendt, Silke Brueckler; **London:** William J. Coughlin, John Tunstall, Robert Gibson, Derek Barlow; **Melbourne:** Alicia Grobuchi; **Mexico City:** Jack Kearney; **Paris:** Robert E. Farrell, Helen Avati; **Rio de Janeiro:** Peter Weaver; **Tokyo:** Dan Kurzman; **Atlanta:** Charles T. Dixon, Jr.; **Cleveland:** William G. Meldrum; **Dallas:** Kemp Anderson, Jr., Mary Lorraine Smith; **Detroit:** Donald MacDonald, Nancy Ann Moore; **Los Angeles:** John K. Shinn, Michael J. Murphy; **San Francisco:** Margaret Ralston, Jeness Keene, Sue Johnson

ASSOCIATE PUBLISHER Bayard E. Sawyer

ADVERTISING MANAGER John M. Holden

BUSINESS MANAGER Richard E. McGraw

BUSINESS WEEK • DECEMBER 21, 1957 • NUMBER 1477

(with which are combined The Annalist and the Magazine of Business) Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1948), Founder. **PUBLICATION OFFICE:** 99-129 North Broadway, Albany 1, N. Y. See panel below for directions regarding subscriptions or change of address. **EXECUTIVE, EDITORIAL, CIRCULATION AND ADVERTISING OFFICES:** McGraw-Hill Building, 330 West 42nd Street, N. Y. 36, N. Y. Donald C. McGraw, President; Joseph A. Gerardi, Executive Vice President; L. Keith Goodrich, Vice President and Treasurer; John J. Cooke, Secretary; Nelson Bond, Executive Vice President, Publications Division; Ralph B. Smith, Vice President and Editorial Director; Joseph H. Allen, Vice President and Director of Advertising Sales; A. R. Venezian, Vice President and Circulation Coordinator. Subscriptions to Business Week are solicited only from management men in business and industry. **POSITION AND COMPANY CONNECTION MUST BE INDICATED ON SUBSCRIPTION ORDERS. SEND TO ADDRESS SHOWN IN BOX BELOW.** United States subscription rates for individuals in the field of the publication, \$4 per year; Canada, \$7; other Western Hemisphere countries and the Philippines, \$20; all other countries, \$25. Single copies, 50¢. Second class mail privileges authorized at Albany, N. Y. Printed in U. S. A. Title registered in U. S. Patent Office. © Copyright 1957 by McGraw-Hill Publishing Co., Inc. All rights reserved.

SUBSCRIPTIONS: Send subscription correspondence and change of address to Subscription Manager, BUSINESS WEEK, 330 W. 42nd Street, N. Y. 36, N. Y. Subscribers should notify publisher promptly of any change of address, giving old as well as new address, and including postal zone number, if any. If possible, enclose an address label from a recent issue of the magazine. Please allow one month for change to become effective.

POSTMASTER . . . Please send form 3579 to Business Week, 330 W. 42nd Street, N. Y. 36, N. Y.

READERS REPORT



Famous Whaler

Dear Sir:

We read with great interest the article *The Whalers Are Sailing Again* [BW—Nov.30'57,p100].

Needless to say, we are delighted that Archer-Daniels-Midland Co. have gone into partnership with the Peruvians in the business of whaling. The article was most informative indeed and mentioned the "Charles W. Morgan" several times. However, we are sorry you did not indicate in the piece that the "Charles W. Morgan" is still in existence and enshrined here at Mystic Seaport where thousands of people come to view her each year. I am enclosing a photograph of her as she is today. . . .

CHARLES A. BROOKS

MYSTIC SEAPORT
MARINE HISTORICAL ASSN., INC.
MYSTIC, CONN.

Too Many Degrees

Dear Sir:

Regarding Hot Cargo [BW—Nov.16'57,p50] . . . You state that the National Labor Relations Board has now taken a 360-degree turn in its construction of "hot cargo" contracts.

This would put it back where it started, i.e., indicating that its recent holding (that "hot cargo" clauses in union contracts are invalid), is the same as its original construction.

Actually, as you have pointed out, the board has really completed an "about face," since it decided the Conway Express Case in 1949, which is a turn of exactly 180 degrees instead of 360.

Incidentally, it is to be hoped that the board, following its logic in the Genuine Parts Case of Atlanta, holding the "hot cargo" clause in-



*...in boom times or
in bad, we have the
capacity to fill
your orders or
we don't take them!"*

NEW REPUBLIC CAPACITY NOW PRODUCING AT

- BUFFALO, N. Y.**—Increased bar output
- CLEVELAND, OHIO**—two new open hearth furnaces
 - Increased hot and cold rolled sheets
- GADSDEN, ALABAMA**—two new electric furnaces
 - Introducing cold rolled sheets, continuous galvanized sheets, corrugated and flat
 - Increased hot rolled sheets
- WARREN, OHIO**—two new electric furnaces
 - Increased cold rolled, silicon and galvanized sheets
- CHICAGO, ILLINOIS**—Increased bars, rods, wire and seamless pipe
 - enlarged three electric furnaces

Fair treatment to our customers has been Republic Steel's firm policy over the years.

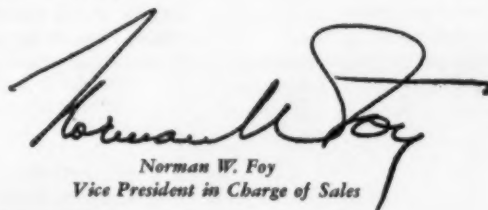
Through the postwar years, we were under severe pressure to take on new customers in many fields as well as to increase the tonnage of steel to particular categories of steel users. Republic maintained a position of fair, equitable treatment to steel users, with no preference to our own manufacturing divisions. This is a stand of which we are proud.

It has been our aim to build up our capacity so that we could provide more steel tonnage for existing customers as well as take on additional users. We have always considered our

assurances of steel to customers to be real assurances, for we had to have the capacity to back up the orders. This is the reason for our substantial expansion program.

Republic's new two million ton expansion completed this month enables us to take on, with complete confidence, additional tonnages from old customers and orders from new customers.

When you place your orders with Republic—from pig iron to special finished steel, or for any of our multitude of fabricated steel products—you know that in boom times or in bad, we have the capacity to fill your orders or we don't take them!



Norman W. Foy
Vice President in Charge of Sales



REPUBLIC STEEL

General Offices • Cleveland 1, Ohio

World's Widest Range of Standard Steels and Steel Products

Alloy, Carbon, Stainless Steels • Titanium • Bars • Plates • Sheets • Strip • Tin Plate • Terne Plate • Cold Finished Steels • Steel and Plastic Pipe • Tubing • Bolts • Nuts • Rivets • Wire • Farm Fence • Nails • Pig Iron • Iron Powder • Coal Chemicals • Fabricated Steel Products • Steel Building Products • Steel and Aluminum Windows • Steel Kitchens • Shipping Containers • Materials Handling Equipment • Drainage Products

Rockwell Report



by W. F. ROCKWELL, JR.

President

Rockwell Manufacturing Company

SINCE WE DEPEND SO HEAVILY on engineering, we have given the problem of adequate scientific manpower a great deal of thought not only in terms of our immediate needs but, more importantly, in terms of our long range goals.

Of course there is no easy solution and no perfect solution to the shortage of engineers, and what works for one company may not be at all practical for another. For us, a combination of several different approaches seems to make sense.

One is the judicious use of outside consultants on particular projects. The effect is to multiply our own staff quickly, without the time and money cost of hiring people in a very difficult market. Another partial solution, for us, is related to our recent purchase of a manufacturing company in West Germany. This brought into our organization a staff of 260 scientific people, many with doctor's degrees.

But in our experience, the soundest and most practical long range approach to the shortage of scientific and technical manpower is to use that manpower more efficiently. To us this simply means that we use engineers as engineers, not paper shufflers; scientists as scientists, not bottle washers; technicians as technicians, not clerks.

That direct approach has two important advantages, we find. First, scarce scientific manpower becomes immediately more productive when it is used to do only what it does best. Second, under these conditions the job of each engineer or technician becomes far more satisfying professionally and personally rewarding. Good men are more apt to stay long enough to contribute both to the company and to their own individual growth.

* * *

A new lightweight aluminum gas meter, designed primarily for commercial and industrial services requiring large capacity at low working pressure, has been introduced by our Meter and Valve Division. One of the important advantages is light weight (about half the weight of other meters of its capacity) making it easy for just one man to carry and install it.

* * *

Scrap handling is one of the many "small" factors, often overlooked, that can influence profitability of plant operations. We've found it worthwhile to devote considerable time to a study of segregation of various kinds of scrap, the handling of it within the plant, and its condition for each pick-up by the scrap dealer.

* * *

For the first time, every item in our greatly expanded line of Walker-Turner "light-heavyweight" machine tools and accessories (including several brand new tools) is included in a single reference manual. One helpful feature of the 48-page book is the separate listing of capacities, speeds and dimensions of each model to simplify the selection of the right tool for each specific metal-working or woodworking job.

One of a series of informal reports on the operations and growth of the

ROCKWELL MANUFACTURING COMPANY

PITTSBURGH 8, PA.

for its customers, suppliers, employees, stockholders and other friends



valid with respect to common carriers, may now see its way clear to outlaw the "union label" clause, as a further protection against secondary boycotts, which is prohibited by the Taft-Hartley Act.

FRANK CARTER

ATTORNEY
ENID, OKLA.

New Technique

Dear Sir:

In your Polyglots—and a Touch of Babel [BW—Sep.21'57,p151] you reported that the Elgin National Watch Co. "dipped into a deficit to pay dividends."

Can you please tell me in some detail how they managed to perform this feat? If I can master the technique, I plan to dip into my current deficit balance to pay income tax and other obligations.

One of the amazing characteristics of the new economic system which Elgin seems to have developed is that it is not only self-perpetuating, but self-accelerating. The more one pays for out of his deficit, the bigger it becomes, and the more things he can then afford to pay for by dipping into his deficit.

If the "Elgin method" catches on, I predict that it will set off a spending boom which will make the last 10 years look like a depression.

A. C. MALMSTEN

MIDLAND, MICH.

• As you rightly point out, dipping into a deficit to pay dividends is a mighty neat trick. However, it was a simple case of Business Week—not Elgin—dipping into the wrong place.

Clarification Needed

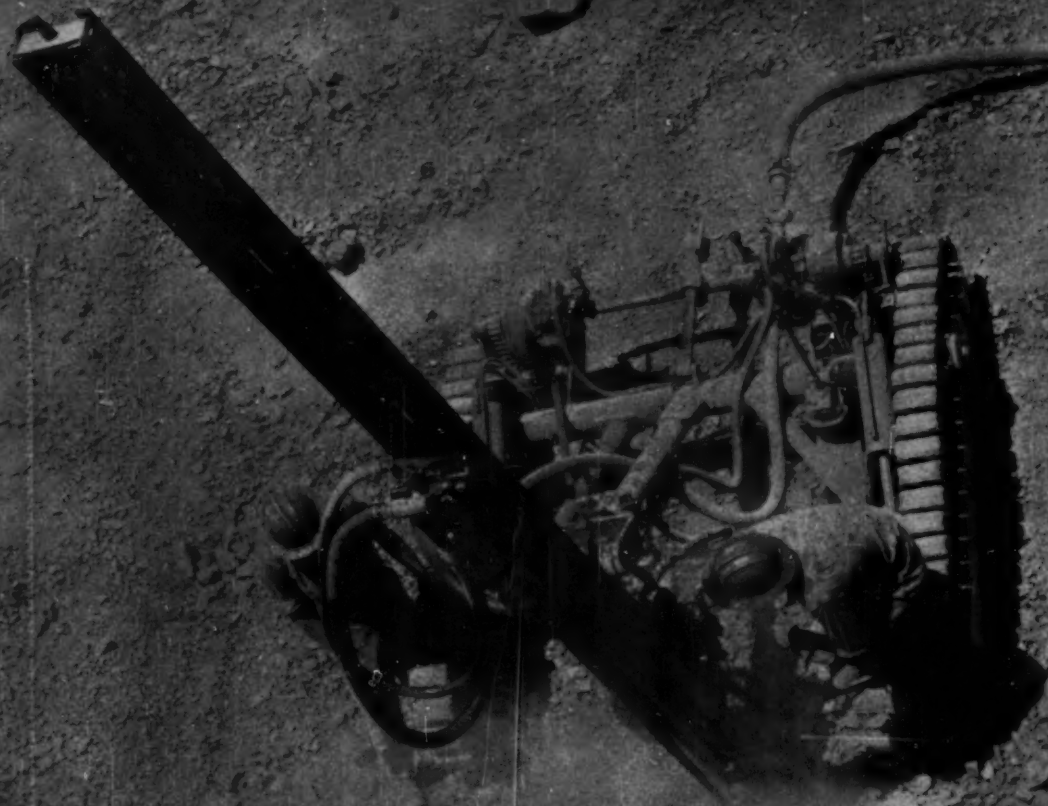
Dear Sir:

On page 187 of your November 16 issue the statement is made that "it takes more than three years for the simplest invention to be patented." If this means, as seems to be the case, that the period between filing an application and the issue of the patent is normally more than three years, the statement is obviously in error. I suspect most of your readers will so interpret the wording, and you may think it worthwhile to clarify your meaning.

CARL S. MINER

CONSULTING CHEMIST
CHICAGO, ILL.

• Our reporting shows that it takes on the average about 3½ years between the time a patent application is filed and final disposition.



This Gardner-Denver "Air Trac"® is helping to move over 2,000,000 cu. yd. of rock from a section of the Inter-American Highway in Costa Rica.

NEW DREAM HIGHWAY "MARRIES" TWO CONTINENTS

For half a century now, people of North and South America have dreamed of an overland transportation artery that would link their two great continents.

Today, that dream is rapidly becoming a reality with construction of the new Inter-American Highway—a vital link in the Pan-American highway system which will stretch from northern Alaska to the tip of South America.

There are, however, some nightmarish aspects. One is cutting through the rocky, mountainous terrain of picturesque Costa Rica—3000 to 6000 feet above sea level.

On one small, but vital section of this magnificent new highway, Gardner-Denver is helping move some 5½-million cubic yards of earth. About 40% is rock that will have to be drilled and blasted. Seven different kinds of Gardner-Denver equipment are working on this one section, alone. They include rock drills, air compressors, paving breakers and backfill tampers.

For nearly 100 years, Gardner-Denver has aided the progress of major projects—not only in this country, but throughout the world. Gardner-Denver Company, Quincy, Illinois.



This Gardner-Denver rotary compressor supplies compressed air to the drilling equipment.



ENGINEERING FORESIGHT—PROVED ON THE JOB
IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING

GARDNER - DENVER

R. V. Merrifield, Assistant Secretary & Insurance Manager, Air Reduction Company, Inc., states, "No Safety Program is complete without an effective eye protection program."



How Air Reduction Company Reduces Eye Accidents

**... 42 Eyes Saved,
51,000 Cases Prevented,
\$453,000 Saved in 13 years**

A leader in the industrial gas and welding industries, Air Reduction Company, Inc. ("Airco") has also been a leader in industrial eye protection. They state: "In the 13 years since the start of a formal Eye Protection Program, 3,000 employees have worn protective glasses for 23,200 man years (approx. 464 million man hours).

"Result: Records show the following estimated savings — Eyes, 42; Doctor's Cases prevented 530; First Aid Cases prevented 50,902; money savings, \$453,550. Estimated yearly savings per protected employee, \$19.60 (First Aid, Medical and Eyes Saved)." Airco concludes, "the potential loss of an eye from the hazards of a work operation is the basic justification of an eye protection program. The additional potential dollar savings in medical and compensation

costs, and time per employee protected per year indicate that the program is self-supporting and a valuable asset in the Company balance sheet of manpower and dollars."

Quality eye protection equipment made for the man, the job and the hazard is a requisite of an eye protection program that *works!* American Optical Company makes this type of equipment . . . and it costs no more. Write us or call your nearest AO Safety Representative.

Always insist on
AO Trademarked
Lenses and Frames

American  Optical
COMPANY
SAFETY PRODUCTS DIVISION

SOUTHBIDGE, MASSACHUSETTS
Branches in Principal Cities

BUSINESS OUTLOOK

BUSINESS WEEK

DEC. 21, 1957



Signs of business deterioration are increasingly plain; the scattering of official figures for November confirms what we already knew.

The impact of cuts in federal spending has been just what you'd expect on an economy that already was losing steam (BW—Aug. 17 '57, p26-28). Unhappily, December's results won't show any turn in the tide.

Federal economizing, obviously, already is a thing of the past.

Spending doubtless has hit bottom by now; it will go up sharply when Congress votes new money for missiles (and tilts the debt ceiling to make the additional expenditures possible).

But higher federal outlays can't bolster things overnight.

Business has started pulling in its belt. Inventories must be cut, and spending on plant and equipment no longer seems pressing.

Darkening the picture psychologically is the sad state of the stock market. November's recovery, by Tuesday's close, had been wiped out.

Pursestrings aren't loosened by declines such as we have seen since July. Nor are investors' spending attitudes helped any by disappointments that are becoming more frequent on dividends (BW—Dec. 14 '57, p81).

Here are the November indicators that show best what has happened:

Production—measured in physical terms by the Federal Reserve Board's index (1947-49 average equals 100) is at 139, off 6% from the peak.

Personal income—money received by individuals from all sources declined slightly for the third month in a row.

Employment—available jobs, for the first time in a long while, fell behind year-earlier levels; in factories, the year-to-year sag in the number of jobs widened to 625,000.

—●—
Manufacturing's declining activity is most closely related to two things: (1) steadily dwindling new orders (partly military), and (2) the need to work down inventories at the plant and in the field.

Even a month ago, it was clear that machinery output and output of hardware for the military were dragging down production of durable goods. But it had at least appeared that softgoods volume was holding.

Now, however, the Federal Reserve has revised its softgoods index down 2 points for October. This, with a 1 point decline in November, put activity a shade lower than a year earlier.

Metalworking in general suffered further output declines last month.

However, the hardgoods category that went off most sharply was transportation equipment exclusive of autos and trucks. The major factor here was aircraft where military cutbacks were really biting deeply.

Smaller spending by manufacturers on capital equipment shows up in machinery's 10% drop since the end of last year.

—●—
Unemployment's unseasonably sharp rise in November is, of course, the big labor market news (page 18). However, it is also worth noting that the

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

DEC. 21, 1957

number of people working fell more than seasonally also. And they suffered a further decline in the number of hours worked per week.

The decline from October to November of more than a million in the number of people working at all kinds of jobs (including farming) must be partly blamed on bad weather that closed in on outdoors pursuits.

But there also was another dip in factory jobs where weather isn't a significant factor. Here the month-to-month loss was more than a quarter of a million compared to the more nearly normal 50,000 a year ago.

Continuing reports of layoffs indicate that unemployment has gone on rising in December. A steady rise in the numbers putting in new claims for unemployment compensation and in the total actually drawing checks points in the same direction.

In the midst of all this, it is easy to forget that some companies are rehiring laid-off workers. In Cincinnati, for instance, Aluminum Industries said this week it was recalling about 200.

Hours worked in factories each week declined again in November. And now it is hitting hardest in durable goods; workers here are averaging 1½ hours a week less than a year ago and 2 hours less than in 1955.

—•—

Lower work forces and shorter hours inevitably are having their effect on payrolls. Wage and salary payments have dipped \$2½-billion since August whereas personal income from all sources is off only \$1½-billion.

Earnings of wage-and-salary workers still are ahead of a year ago.

Yet the margin of gain, which had been averaging better than 5% until late in the summer, now has fallen to little better than 2½%.

—•—

Many petroleum analysts say the worst is over for the oil industry.

Yet that doesn't bar a cut in the crude oil price, contradictory as this may sound. (Nor does it preclude lower oil company profits early in 1958 when the comparison will be with the swollen Suez period.)

Signs of improvement result from curtailed output of crude oil and price concessions on refined products to encourage consumption.

But these things naturally kick back on crude oil's market position.

Already some chipping away of oil prices has taken place (mainly in fields with poor transportation or other local problems). And concessions are rumored on small lots even on the price-setting Gulf Coast.

Meanwhile, refiners are pinched between the cost of crude on the one hand and their cut prices for refined products on the other.

It may be a tip that Southern Minerals Corp., this week cut its buying price for crude by 10¢ a bbl. Though Somico is by no means a dominant factor in the market, it was a prime mover in last winter's advance.

Crude oil producers draw little comfort from their statistics.

Even though their output has run behind a year ago for about five months—and in spite of the fact that imports have been pulled down about to last year's level—crude above ground still tops year-ago levels.

AMERICA ON ITS KNEES:

It is not heaven there by the hammer or mill, but earth, intelligently,
RESPONSIBLE, CONFIDENT, POWERFULLY America now knows it can destroy communism
to win the battle for peace. We need just nothing or no one... except God.

OUR FATHER IN HEAVEN:

We are the ones who have made
The world that you have made for us to live in peace
We have made into an armed camp
We live in fear of war to come
We are afraid of "the terror that flies by night,
and the arrow that flies by day,
the pestilence that walks in darkness
and the destruction that wastes at noon-day."
We have turned from you to go our selfish way
We have broken your commandments
and denied your truth. We have left your altars
to serve the false gods of money and pleasure and power.
Now, darkness gathers around us and we are confused
in all our counsels. Losing faith in you,
we lose faith in ourselves.
Inspire us with wisdom, all of us of every color, race and creed,
to use our wealth, our strength to help our brother,
instead of destroying him.
Help us to do your will as it is done in heaven
and to be worthy of your promise of peace on earth.
Fill us with new faith, new strength and new courage,
that we may win the Battle for Peace.
Be swift to save us, dear God,
before the darkness falls.



A CHRISTMAS MESSAGE FROM CONRAD N. HILTON:

★ Five years ago we published a public service message entitled "AMERICA ON ITS KNEES." Like a pebble dropped in still waters Uncle Sam's Prayer spread around the world to 53 countries, over the barriers of oceans and mountains, of creed and language. Since then we have received nearly half a million requests for reprints from people in all walks of life. Every day new letters arrive asking for copies. Realizing that perhaps our world is in even greater need of this prayer today, we are republishing it this Christmas season. If you desire a free reprint suitable for framing, you are invited to write to me personally — Office of the President, Hilton Hotels Corporation, 9990 Santa Monica Boulevard, Beverly Hills, California.

Conrad N. Hilton

PRESIDENT OF HILTON HOTELS

OUR FATHER IN HEAVEN:

WE PRAY that you save us from *ourselves*.

The world that you have made for us, to live in peace, we have made into an armed camp.

We live in fear of war to come.

We are afraid of "the terror that flies by night, and the arrow that flies by day,
the pestilence that walks in darkness and the destruction that wastes at noon-day."

We have turned from you to go our selfish way.

We have broken *YOUR* commandments and denied *YOUR* truth.

We have left *YOUR* altars to serve the false gods of money and pleasure and power.

FORGIVE US AND HELP US

Now, darkness gathers around us and we are confused in all our counsels.

Losing faith in you, we lose faith in ourselves.

Inspire us with wisdom, all of us of every color, race and creed,
to use our wealth, our strength to help our brother, instead of destroying him.

Help us to do *YOUR* will as it is done in heaven
and to be worthy of *YOUR* promise of peace on earth.

Fill us with new faith, new strength and new courage,
that we may win the Battle for Peace.

Be swift to save us, *dear God*, before the darkness falls



Holiday Greetings

TO all our friends in the United States and Canada, we of the Metropolitan Life extend our warmest wishes for a Merry Christmas... and the happiest of New Years in 1958 ✦ ✦ In the true spirit of Christmas, our thoughts turn to the gifts with which Divine Providence has enriched our lives. We have much for which to be thankful... warm and enduring ties with families and friends, peace in our two nations and the great blessing which more and more of us are enjoying throughout life... good health ✦ ✦ May you and your family have, in abundant measure, health, happiness, peace of mind during this Holy Season and in all the years ahead.

Metropolitan Life Insurance Company

(A Mutual Company)

1 Madison Avenue, New York 10, N. Y.

COPYRIGHT 1957—METROPOLITAN LIFE INSURANCE COMPANY



Paris gave a gala welcome to Pres. Eisenhower. But despite his presence at the summit . . .

NATO Falls Shy of U. S. Hopes

In Paris at midweek it had become clear that the NATO summit meeting would not produce what the U.S. hoped for—a single NATO voice and a single NATO purpose. That had been Pres. Eisenhower's goal when he crossed the Atlantic in a personal effort to offset the effects of the Soviet missile lead.

But as the NATO meeting wound up, and final arguments were being hammered out, it was equally clear that NATO is not falling apart—despite some very real strains. Instead, NATO is in process of turning into an Atlantic partnership between the U.S. and Western Europe rather than the U.S.-dominated coalition it has been.

In the process, NATO may look wobbly for a while. However, it could come out of the stresses and strains of

this meeting, and of the months ahead, stronger than ever. That will depend mainly on how far the NATO members, and especially the U.S., are willing to apply the Eisenhower-Macmillan idea of interdependence. Even now there is a new awareness among the European members that they are committed to come to the defense of the U.S., if we are directly attacked, just as we are committed to go to their defense.

• **Stiffer Attitudes**—One thing is clear: From now on the U.S. will have tougher bargaining, and even opposition to American views, from our NATO friends—from even as staunch an ally as West Germany's Chancellor Adenauer. For example, Europe isn't taking our intermediate-range ballistic missiles on

the terms we hoped for. And it is insisting on making another try at talking the Russians into a European settlement—something Secy. of State Dulles didn't want right now.

Western Europe's new attitude is the price the U.S. is paying for having lost some of its deterrent nuclear power and for having lost its own immunity to attack by Soviet missiles. But, at the same time, some of the earlier differences at the conference are the price the Eisenhower Administration is paying for putting most of its emphasis at the meeting on the military side. Thus, we appear to have rattled the saber before the conference and then resheathed it under pressure of our allies.

You will also hear critics of the



DULLES, waving to crowd as he goes to church, had hoped for readier agreement on plan to stock NATO with IRBMs.



GEN. NORSTAD, supreme commander of NATO forces, is slated for a more independent role from here on.



HEADS OF STATE, assembled in Palais de Chaillot, pressed

Administration, both in Washington and in Europe, say that Eisenhower's position would have been stronger at Paris if our own defense effort since Sputnik had matched the needs of the time and if Western Europe had more confidence that the Administration could check the business recession here before it hurts the whole free world.

I. Resistance to Missiles

The U.S. delegation went to Paris with a set of proposals that were primarily military. Little attention had been paid in Washington's preparations to the problem of political and economic interdependence in the Atlantic Community or the problem of negotiating with Russia.

There were two reasons for this:

- Secy. of State Dulles, with the backing of Eisenhower and most U.S. military strategists, considers it useless

to talk with the Russians unless you negotiate from strength.

- The State Dept. didn't want the U.S.—the one genuine world power in the West today—to get involved in the non-European political or economic affairs of our NATO allies, for fear this would aggravate our difficulties in the Afro-Asian countries and in the Far East.

- **Missile Proposal**—Washington's main goal at Paris was to sew up agreements on intermediate missiles—on issues such as the supply of U.S. missiles, missile production in Europe, location of bases, and the final control over their use. In military terms, IRBM bases in Europe make a lot of sense to American and European strategists. They would augment the deterrent power of the Strategic Air Command by bringing Soviet territory within reach of a nuclear missile attack during the several years it's likely to take us to put intercontin-

ental ballistic missiles into our nuclear arsenal.

The missile issue apparently became the central one at Paris. The Europeans insisted first that NATO should not sign up for missiles until another effort had been made at East-West agreement. And second, they insisted—and almost certainly will go on insisting—that control over IRBMs cannot be left solely with the White House in Washington.

- **Continental View**—Here's the way the European governments, with the possible exception of Britain, look at the missile problem:

The advent of nuclear weapons on the Continent, in the form of IRBM launching sites, would have the appearance of a final commitment in the East-West struggle. If they come to rely on such weapons, the Europeans claim, they will lose all their room for maneuver in foreign policy matters—and



Eisenhower for further talks with Russia—but remained loyal to NATO principle.

any hope they now entertain of solving old European problems with Russia—except as Washington is willing to talk with Moscow.

At the same time, many European political leaders feel that they now are in the best position ever to get Russia to talk disarmament. They say, for example, that they can put things to Moscow this way: We are on the verge of making a firm decision to accept American nuclear missiles on the Continent, and now is the time to settle our long-standing problems. If you don't, we will go along with the Americans and their missile bases—and you will never get them out of Europe.

• **Bulganin's Note**—Whenever it may be that East-West negotiations are actually carried out, the Europeans seem determined to find out whether anything concrete lies behind a Soviet negotiating offer that was included in the notes that Premier Bulganin ad-

ressed to most NATO powers last week. Although Bulganin seemed primarily concerned with frightening the people of Britain and Western Europe, he did make one concrete proposal for a partial European settlement. This was for negotiated agreements that would ban the establishment of nuclear weapons and bases in Poland, Czechoslovakia, and the two halves of Germany. It is this idea that seems to interest the Europeans particularly.

The official U.S. assumption today is that Moscow is merely using this proposal as a diversionary tactic, that the Russians will never agree to any serious inspection of the proposed zone of nuclear neutrality. Even so, there is a lurking fear in Washington that the Russians might be willing to follow through, figuring that their scheme could be made the opening wedge for the complete neutralization of Central Europe—something that probably would



EISENHOWER, flanked by Britain's Macmillan (left), NATO's Spaak, urges unity.



EUROPE'S SPOKESMEN were France's Gaillard (left) and Bonn's Adenauer.

undermine the whole NATO alliance.

The fact is that Europe's desire to negotiate won't necessarily hurt our chances for setting up a chain of IRBM bases in Europe—in France, Italy, Greece, and Turkey, plus those already agreed to for Britain. But since the Paris conference didn't give the U.S. strategy planners the full green light they wanted, the whole process may take longer than Washington planned on.

II. A Longer Road

In the case of Germany, the U.S. probably can go ahead with plans to equip U.S. forces there with IRBMs, though no hard decision is likely until the Russians show their hand on the Bulganin proposal. At best, the Germans will hold off equipping their own forces with IRBMs for at least two years—and probably won't do it then

unless Bonn gets a joint request from its NATO partners to do so.

• **Production Plan**—One plan the U.S. delegation took to Paris was to establish an independent European center for development and production of IRBMs. But European observers were saying this week that the only way to get IRBM production going across the Atlantic would be to provide an independent NATO source of nuclear warheads—possibly through Britain. Then the European end of NATO would have the same sense of independence within an interdependent military system that the U.S. now gets from SAC.

Interdependence on the Continent in the production of new tactical weapons and other modern arms looks like a better bet. The Germans, French, and Italians already have been discussing a joint production setup for a variety of new defensive weapons.

• **Coordination Moves**—To avoid all duplication and waste in NATO clearly is impossible. Traditional national rivalries are bound to prove even stickier to deal with than the service rivalries in our Pentagon. And commercial angles of international trade can be important to many modern weapons.

Still, the NATO nations are planning steps to eliminate duplication and wasted effort and to give more meaning to the doctrine of interdependence. By avoiding duplication, they hope to get the military strength they need without having to push present costs up too much.

Here are some of the schemes that have been launched or are now in the planning stage:

• A joint NATO Air Force, which would grow out of the nearly unified air forces of Belgium and the Netherlands and would include additionally at least West Germany and France.

• A NATO navy, with U.S. participation, which would bring economies to France in particular.

• Joint research establishments in the military field, with some U.S. participation.

• A joint educational effort between the U.S. and Europe, especially for basic scientific research.

A new interdependence in NATO, which is developing—paradoxically—along with Europe's new independence, will show up in at least two other places:

• The increased authority of NATO's commander-in-chief, U.S. Gen. Lauris Norstad.

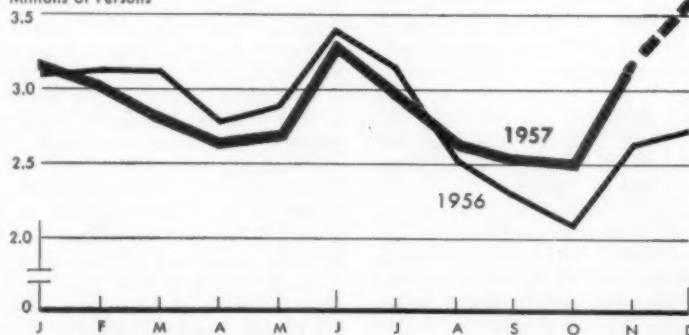
• More power for the NATO Council of Ministers and for Secy. Gen. Paul Henri-Spaak (a Belgian). Apparently it is to be Spaak's job to get the NATO members to agree, through the council, on a common approach to negotiations with Moscow.

Unemployment Boils



Unemployment—Up and Rising

Millions of Persons



Data: Dept. of Commerce.

© BUSINESS WEEK

Up a Hot Issue for Congress

With the number seeking jobless pay up 50% (picture, left), demands are growing for easier credit and tax cuts.

Four-million unemployed workers will present the Administration with a major political issue when Congress convenes on Jan. 7.

Administration economists freely admit that seasonal joblessness alone will carry the count from the mid-November figure of 3.2-million to over 4-million by mid-January (chart, lower left). Another half-million or more may be added through February if the present trend continues.

With the 1958 elections looming ahead, 4-million unemployed will constitute a nearly irresistible bread-and-butter issue for Congress. Calls for further easing of credit and even a tax cut are beginning to be heard in Washington.

"Unemployment is a political issue right now," says one Democratic congressman. "I predict that by January it will become a very noisy issue."

• **Spotlight**—With the total labor force in the neighborhood of 70-million, economists don't consider 4-million unemployed an alarmingly high percentage. Before World War II, in fact, most experts would have said it was less than the ordinary "frictional unemployment" that results as workers shift from one job to another.

But during the long business upswing, the U. S. has got used to an absolute minimum of joblessness. Even in the 1954 dip, the total didn't get above 3.7-million. And this fact lends political weight to the new rise in the total.

Growing unemployment is already a major consideration for the three-man Council of Economic Advisers, now drafting the President's Economic Report for presentation to Congress in January. On Capitol Hill, the Joint Economic Committee staff is also studying the unemployment situation.

In the main, however, the unemployment issue has been fairly quiet so far. Sputnik and the concern over the U. S. missile program have drawn attention away from ordinary political issues.

But now that the unemployment count has begun to climb rapidly, the AFL-CIO is preparing to press its demands for easier credit and an increase in personal income tax exemptions.

Many congressmen, after seeing their constituents this month, may join in demands for action. What they see and hear is bound to be more persuasive than the official statistics. For the fact is that the current decline is spreading

faster and deeper than most economists expected.

• **Spread**—BUSINESS WEEK reporters, looking into employment conditions throughout the country last week, found unemployment spreading beyond the depressed industries and threatening stronger areas of the economy.

In most states, the number of jobless drawing unemployment compensation is up by 20% to 100% over last year, and has been climbing steadily. Nationwide, the latest Labor Dept. figures show a total of 1.8-million on compensation rolls, some 50% more than last year. In November, the total grew at the rate of 100,000 a week.

• **Where It Hits**—Employment declines are greatest in the two areas where the current dip started: aircraft and the metal trades. But layoffs are now beginning to crop up in previous areas of strength, such as electrical equipment, electronics, and construction. Even where steady, long-term growth in employment has been characteristic, as in the services and retail trade, demand for workers is slackening. In such depressed industries as textiles, lumber, and nonferrous metals, employment has declined even further.

Layoffs have hit the younger, low-seniority workers hardest, of course. But by now even engineers and draftsmen are being laid off by some companies. Skilled workers with high seniority are being furloughed in some railroad shops for the first time since the 1930s. And the seniority of some aircraft workers being laid off dates back to the pioneering days of the 1920s.

• **Part-Time, Too**—Even temporary and part-time employment is affected. Steel workers on shortened hours in Cleveland and Chicago are working part-time as taxi-drivers or in retail stores. A Boston company supplying temporary help reports plenty of applicants but fewer job orders.

In almost every city, temporary Christmas jobs were more readily filled this year.

• **Areas**—Here's how the unemployment situation shapes up in some key areas:

New England. Unemployment claims are running 63% above last year—and about a third are in the long-depressed textile industry.

In the Boston area, chemists, personnel men, and public relations men are joining the unemployed, or taking temporary jobs. Layoffs in machine tools, aircraft, electrical machinery, and brass mills have brought unemployment

in Connecticut to the highest level since 1949.

New York. Insured unemployment is 50% higher than last year. Slower activity in upstate durable goods plants and aircraft layoffs on Long Island are chiefly responsible.

Pennsylvania. Insured joblessness is up about 40% from last year. Hardest hit are steel, apparel, machinery, and electrical machinery.

In Philadelphia, engineers, tool and die makers, and draftsmen are being affected, although conditions are still moderately good. Around Pittsburgh, insured unemployment is 50% greater this year. Some steel mills have cut their payrolls by 10% or more.

Ohio. New unemployment claims are running almost double the year-ago rate, with layoffs heavy in steel, machine tools, and autos. In Cleveland, some 30,000 are unemployed; many highly skilled workers, including about 100 engineers, are now seeking jobs.

Michigan. Unemployment is the highest for any November since 1949, and more than 6% of the labor force is unemployed. Only Ford has announced any sizable layoffs among the big auto companies, but joblessness in the Detroit area has been growing.

Illinois. Insured unemployment is about 40% higher than in 1956. In the Chicago area layoffs are cropping up in steel and machinery. Most of the new jobless are unskilled migrants.

Utah. About 40% more workers are drawing unemployment benefits this year. Major trouble spots have been in the lead and zinc mines and in steel. Hiring by such space-age companies as Thiokol Chemical, Marquardt Aircraft, Litton Industries, and Sperry Rand has helped.

Washington. Unemployment has increased sharply since August, is now running 52% ahead of a year ago. About 20% of the labor force is unemployed in logging and lumbering areas. Layoffs at Kaiser's aluminum plant near Spokane and at the Bremerton Naval Yard have helped swell the jobless total. Employment at Boeing's aircraft plants is still 10,000 higher than last year.

California. About 66% more workers are drawing jobless benefits than in 1956. The aircraft industry in Southern California has some 30,000 fewer workers than in the spring. Nevertheless, unemployment in Los Angeles in November was only about 3.5% of the labor force.

Scattered layoffs in the San Francisco-Oakland area have occurred in military installations, electronics, and construction industries.

As Atlas Blasts Off, Congress

Between an ICBM that worked, the Senate's hearings, and an Air Force Assn. meeting, it was a week full of revelations on the nation's defense program.

The American people may have learned as much about where the U.S. stands in defense this week as they ever had in any one week before.

The most spectacular tidings, of course, came from the Florida sands, where the missile testers at last gave the U.S. something to shout about. At Cape Canaveral, the Atlas intercontinental ballistic missile (picture, left) was successfully fired for the first time. Twice before, the big ICBM had lumbered up from its launching pad, only to be destroyed from the ground because it wasn't working right. On Tuesday, though, the fiery bird took off and performed according to specifications on a flight of several hundred miles. This was far short of the 5,500-mile range for which the Atlas was designed, but the Air Force said it hadn't intended to send the device the full distance in this attempt.

Just before the flush of this success, William M. Holaday (picture, above right), the Pentagon's director of missiles, told the Senate preparedness subcommittee that a speedup on Atlas will deliver the weapon to the Air Force by 1961, four years earlier than originally scheduled.

The number of production workers on the project will be doubled over the next two years, and large-scale orders for guidance systems, nose cones, and rocket engines will be placed ahead of the earlier timetable.

I. News—Good and Bad

This week, too, the public became privy to a variety of other information on defense, including:

- Reports of over-all U.S. weakness in missile development.
- News of interservice rivalries that threatened the very existence of the Joint Chiefs of Staff as an institution.
- Demands for freer spending on research and development.
- Demands for a national space establishment to conquer the moon and outer space.

As might be expected, most of this news stemmed from the Senate Office Building's caucus room, where the preparedness subcommittee headed by Sen. Lyndon Johnson (D-Tex.) heard



TARGET: William Holaday, Pentagon missile director, was butt of criticism.

military and civilian witnesses for the Army, Navy, and Air Force through Tuesday night, then suspended hearings until Jan. 6.

But before that happened, all three services had a chance to defend their own rocket programs, criticize the other two, and damn the Budget Bureau and the White House for putting them in financial shackles.

But an equally important news source was the main meeting hall of Washington's Presidential Arms Hotel. Air Force spokesmen, Air Force contractors—and Vice-Pres. Nixon—gathered there Monday to let the public know how much longer manned bombers would be the nation's No. 1 strategic weapon—and to discuss the coming arsenal of missiles that will be used to deter Soviet aggression. The meeting had been arranged by the Air Force Assn. shortly after the Soviet Sputnik launchings, in order to give Air Force suppliers a chance to wrap their stories in one neat bundle for newsmen.

• **Speedups and Cutbacks**—In addition to the speedup of the Atlas program, these developments emerged from the proceedings:

• Production of the Air Force's Snark, an unmanned, long-range plane with subsonic speeds, will be cut back. This is because the faster Atlas is expected to be operational within three years.

• Atlas will be used by the Air Force in an attempt to launch an earth satellite. J. R. Dempsey, director of the Atlas project for Convair, did not say how long this would take, but presumably it will be at least some months. Already, the Navy's Vanguard and the Army's Jupiter-C are commis-

SUCCESS: U.S. morale was bolstered by firing of the Atlas ICBM, now due for delivery to the Air Force ahead of schedule.

Pushes Its Probe

sioned to make similar tries. Dempsey said the Atlas could launch a moon weighing from 500 lb. to a few thousand pounds, depending on the altitude sought, within six to 12 months. Atlas produces at least 335,000 lb. of rocket thrust—about 10 times the power of the Vanguard, which failed in its first effort two weeks ago.

- The B-52 bomber, the nation's newest strategic plane, will be replaced sometime in the future by the WS-110-A, a radically new airplane using high-energy fuels such as boron and flying at three to four times the speed of sound.

- The B-58, which Convair is now producing for test evaluation, will not supplant the B-47 medium bomber completely for another 12 years.

II. The Gloves Come Off

At the Senate subcommittee hearings, Pentagon explanations of the U.S. lag in missile development became less and less palatable to the members of the committee, Republicans and Democrats alike.

The main Congressional complaint: No one seems to be in charge at the Pentagon—and if the Administration won't see to it that the situation is remedied, then the senators will do it themselves.

- **Butt of Criticism**—Holaday, recently promoted to Defense Dept. Director of Missiles, is rapidly becoming the senators' most likely scapegoat. Sen. John Stennis (D-Miss.), normally a mild-tempered man, flatly called for Holaday's replacement. "The job has outgrown the man," says Stennis. "We have got to have a top man there."

The committee heard testimony from uniformed witnesses that Holaday had exercised little of his new authority to grant priorities, break bottlenecks, or to start or stop projects. Subcommittee Chmn. Johnson said he didn't know who ought to be discharged. But, he added, he would favor an overhaul if necessary to put some steam into the military program.

The Air Force is unhappy with Holaday, too, for withholding a top-production priority from the Titan, a Martin-designed ICBM. However, the Navy has won a priority for its solid-fueled Polaris intermediate-range ballistic missile, designed to be fired from shipboard or from a submerged atomic submarine.

- **Discontent With JCS**—There is an even more significant undercurrent of feeling that the Pentagon's top command—the Joint Chiefs of Staff—is

obsolete and needs replacement. JCS, created shortly after World War II, is a committee of heads of the three services. Admittedly, each chief carries into staff meetings strong biases in favor of his own uniform.

Lt. Gen. James M. Gavin, the Army's research and development boss, proposed an "integrated" staff of military advisers to replace the joint chiefs. The new staff would not be directly identified with any of the services.

Gavin's suggestion is in line with earlier recommendations by Lt. Gen. James H. Doolittle, chairman of the National Advisory Committee for Aeronautics, and Dr. Vannevar Bush, World War II head of the Office of Scientific Research & Development. These men would establish a general staff operating above the individual services to advise the Defense Secretary, the President, and the National Security Council on major policy decisions.

The Air Force Chief of Staff, Gen. Thomas D. White—now on the JCS—endorsed these recommendations. He testified that it's too much for any one man to hold down two full-time jobs. But Gen. Curtis LeMay, deputy Air Force chief of staff, wouldn't go so far: He would merely increase the authority of the JCS chairman, now Air Force Gen. Nathan Twining.

As for the missile program, in the short term it looks as if Defense Secy. Neil McElroy will take a tighter rein. In addition, the White House's new adviser, Dr. James Killian, may gain more direct responsibilities for missile research and development.

III. Men in Space

The recommendation for an independent civilian agency to run space research came primarily from the civilian scientists who testified before the subcommittee. At their head was the Army's top missile brain, Wernher von Braun.

The argument they advanced was this: Under civilian leadership, the U.S. can exploit space technology more quickly and effectively. The military is incompetent to direct this research, the scientists contend; it is too concerned with short-range armament requirements to put sufficient stress on longer-range thinking.

Gen. John B. Medaris, von Braun's boss and commander of the Army's ballistic missile agency at Huntsville, Ala., urged on the Senate committee a "crash program to achieve the manned domination of space." However, the Navy's spokesman, Asst. Secy. Garrison



CHAIRMAN: Lyndon Johnson told Senate group defense may need overhaul.



DEFENDER: Sen. Leverett Saltonstall rallied to support of the Administration.



UNITY: Sen. Prescott Bush suggested unified missile command might work better.



CRITIC: Sen. Ralph Flanders urged Dr. James Killian as a "missile czar."

Norton, asserted such proposals would "dilute" weapons development.

- **Men in Planes**—For all the talk about the nation's missile problems, manned bombers remain the main line of U.S. strategic power—and will continue to be so for some years to come.

At both the Senate hearings and the Air Force Assn. conference, Air Force top command called for increased production of B-52 heavy bombers and B-58 medium jet bombers. The chief of the Strategic Air Command, Gen. Thomas S. Power, was critical of "misconceptions" that missiles will replace bombers any time in the near future.

Gen. LeMay, still the "old man" of the SAC, testified that the nation will, as a matter of fact, even be dependent on the now obsolete B-36 heavy bomber for some time to come. Only half of the 11 U.S. intercontinental bomber wings consist of B-52 jets, he said. And the

B-47, no longer in production, will be part of U.S. defenses until 1970.

- **Coming Soon**—One new plane, Convair's supersonic medium-range bomber, the B-58, is in limited production, and about 10 have been completed. But since it is still being tested, it has yet to join SAC.

The plane of the future, the WS-110-A, is still only a design on the drawing boards, even though it is slated to replace the B-52 eventually for long-range use. Boeing Airplane Co. and North American Aviation are competing for WS-110-A development contracts, and General Electric, among others, is designing an engine at its Evandale (Ohio) plant. Traveling at three times the speed of sound and more, the WS-110-A is expected to be the Air Force's manned plane for the era of missiles, satellites, and manned space platforms.

Is Texas

Sid Richardson denies there's any deal afoot, but several oil companies are reported showing unusual interest in Texas tycoon's properties.

RUMORS PERSIST this week that the vast oil and gas holdings of Texas multimillionaire Sid Richardson may be sold off to a major oil company. Richardson's flat denials, some oilmen suggest, are merely a matter of strategy, in keeping with Richardson's dictum that you "don't learn nothin' when you're talking."

The speculation over such a deal is obviously heightened by the principals reportedly involved. The companies rumored interested in the properties include Atlantic Refining Co., Continental Oil Co., Standard Oil Co., and Humble Oil & Refining Co.—among the biggest and richest U.S. oil firms. They, too, are mum or have issued denials about any deals. Yet Humble engineers and geologists are reported to have made a check of Richardson's properties only last month.

One important reason given for the interest: With oil getting harder to find, most major oil companies often find it cheaper to buy production than to find it.

The other reason is Richardson himself. At 66, he is one of America's richest men, with a personal fortune estimated between \$300-million and \$500-million.

- **Texas Tycoon**—In an age where the odds are spectacular against accumulating a tremendous personal fortune in a lifetime, Richardson stands out like a lonely derrick in the Texas flatlands. In terms of oil wealth, he has only a handful of current rivals.

Richardson has never put a price tag on his oil holdings; estimates by outsiders range from \$200-million to \$400-million. His properties include producing and manufacturing operations. In terms of assets, they stack up well against those of many good-sized oil firms.

Richardson's net oil production is estimated at between 25,000 bbl. and 30,000 bbl. a day, from wells located in just about every producing county in Texas, as well as from very sizable Louisiana holdings. The Fort Worth millionaire's production operations are conducted mainly through Richardson & Bass (Percy Bass is a nephew), Sid Richardson, Inc., and Richardson Oils. Other oil properties include:

- Sid Richardson Refining Co. in Texas City.

Westinghouse Tries Three-Man Rule

Westinghouse Electric Corp.'s top management underwent a broad revision this week—both in people and philosophy.

Mark W. Cresap, Jr. (picture) was elected president and chief administrative and operative officer. He succeeds Gwilym A. Price, who remains as chairman and who will head a new three-man policy and finance committee.

E. V. Huggins, vice-president and secretary, becomes a director, chairman of the executive committee and, with Price and Cresap, a member of the policy and finance committee.

John K. Hodnette, vice-president and general manager, replaces Cresap as executive vice-president.

- **New Setup**—Establishment of the policy and finance committee institutes an entirely new level of management at Westinghouse. Cresap will report to the committee rather than directly to the board. It is through this device that company insiders expect Price will retain his standing as top man on the property. For Westinghouse is discarding the designation "chief executive officer," which Price held as president and chairman.

The move reflects Price's admiration of the "triumvirate" form of corporate responsibility. Most notably, that form has been practiced by U.S. Steel Corp.

Cresap's accession had been rumored for five years, but by no means had all the other changes been anticipated.

It has been no secret that Price has wanted to diffuse the managerial responsibility. That it was done when and as it was is regarded as Westinghouse's final assertion that it has recovered completely from the troubles that racked it in 1955 and 1956 (BW—Oct. 22 '55, p43). When Price turns the



property over Jan. 1, it will have closed its first \$2-billion year—with even higher sales anticipated for 1958—and it will have come close to hitting its earnings target of \$4 per share. A year ago, when it showed earnings of only 10¢—after a strike-ridden year—Price could hardly have made this move gracefully (BW—Feb. 9 '57, p80).

- **The Third Man**—Huggins' elevation to the new triumvirate brings into sharper focus one of the company's highest, but least known, managers. An attorney, Huggins joined Westinghouse's Law Dept. in 1949, took over its New York law office two years later. In 1951 he was elected executive vice-president of Westinghouse International. Late in 1951, he became Assistant Secretary of the Air Force. He returned to Westinghouse two years later as corporate affairs vice-president and secretary.

Oil Empire Up for Sale?



SID RICHARDSON puts no public price tag on his holdings, but outsiders estimate that the value of his oil properties range between \$200-million and \$400-million.

- Sid Richardson Natural Gasoline Co. at Kermit, Tex.

- Richardson Carbon Black Co., a carbon black plant near Odessa, Tex.

These oil properties, while representing the great bulk, do not include all of Richardson's empire. Among his known non-oil holdings are:

- Jack Collier drug store chain in Texas.

- Majority interest in the Texas State Network. Also ownership of several individual radio and TV stations in Texas.

- Del Mar Race Track (in partnership with his long-time friend and business associate, Clint Murchison).

- A string of cattle ranches, including one on St. Joseph's Island, which Richardson owns, in the Gulf of Mexico, eight miles from Rockport, Tex.

- **Carter's Mantle**—Just why Richardson would want to sell out at this time is up in the air. There's speculation in Fort Worth that Richardson, a bachelor, who lives in a modest two-room suite in the Fort Worth Club, would use the money from such a sale

to become a philanthropist, and possibly fill the shoes vacated by Amon Carter, Fort Worth civic leader.

Carter not only had been the power behind Fort Worth's growth, but he also was a friend of Richardson. They were partners in various efforts such as purchasing the Texas Hotel in Fort Worth to keep ownership in their city. And it was Carter who prodded Richardson into various charitable enterprises.

Since Carter's death in 1955, booming Fort Worth's rapid progress has ground to a near-halt. New industries have come in, but not the big ones. The Gruen plan (BW-Mar.17'56,p70)—which would convert the city's downtown area into a vehicle-free pedestrian's paradise—is still on the drawing boards.

However, there has been a vigorous stirring in recent months that has included plans for a million-dollar advertising campaign to attract new industry. The leaders of the new movement are hoping that Richardson may step into this setup.

Church groups also have been very

active recently in approaching Richardson for a helping hand.

- **Odds**—Even so, many in Fort Worth who know him poochpooch the idea that Richardson can ever be talked into taking a major role in civic affairs. They say Richardson has shown very little inclination as a civic sparkplug or as an emulator of the Rockefellers. They are quick to tell this story about Richardson's giving habits:

On a return trip from Europe aboard the *Queen Mary*, Richardson got a phone call from Amon Carter, who wanted the oilman to give \$37,500 to some charity. Carter pointed out he was giving a like sum. Richardson refused until Carter threatened to make the telephone call collect. Only then did Richardson agree.

- **Trader From Athens**—This anecdote also spotlights Richardson's outstanding business characteristic; he's a trader. At the age of 17, he made \$3,500 trading horses in his native Athens, Tex. (birthplace also of Clint Murchison and 50 other oil millionaires).

He later teamed up with Murchison to trade oil leases. They made a small fortune after World War I, but went broke in the 1920s when oil prices dived. Richardson regained his fortune by 1929 only to lose it again.

After 1933, he turned to drilling wells, rather than leasing properties, and he has never regretted the move. Richardson opened up several big Texas oil fields, including the Keystone field where he drilled a total of 285 wells, and came up with only 17 dry holes.

- **Close-Mouthed**—Richardson has always been close-mouthed about his business deals, and generally shy about publicity. He became nationally prominent in 1954, when he and Murchison teamed up to help their friend Robert Young in his proxy fight against the New York Central by buying \$20-million of Central stock.

Richardson numbers among his friends almost everyone who is anyone in Fort Worth and Texas—and many nationally prominent figures as well.

Pres. Roosevelt was a guest at his island retreat, and Richardson has recently been a frequent dinner guest at the White House. In 1952, he made a trip to NATO headquarters in Paris to urge Eisenhower to run for the Presidency.

Richardson once was labeled the "Richest Athenian" of them all by one national magazine, but he never felt that meant too much since his hometown of Athens had only a population of 5,194.

Steel Takes a Hitch in Its Belt

● But it won't be Detroit that's primarily to blame, as Pittsburgh seems to think. Auto production promises to match 1957, and inventory-paring should be about over.

● The real worry is that no steel product line is really booming these days.

● In any event, thanks to the yearend slump in operating rate, the 1958 rate won't be as bad as it might have been when the new capacity is counted in.

For quite a few reasons, Detroit as yet isn't at all sure how many cars it's going to manufacture in 1958—or when it's going to make them (BW—Nov. 9 '57, p81).

Because of that indecision, Pittsburgh is in quite a flap this week. For it professes not to know how much steel it's going to melt next year.

• **Pittsburgh View**—Hence, in view of the way their business has come apart at the seams in the last 30 days, steel-makers simply hold their heads when they ponder the first quarter of 1958. Probably as good a consensus as any, right now is this:

- Next week, steel will hit bottom with a thump.

- It'll stay there for at least five weeks.

- January will be the low month of 1958, only slightly if any better than December.

- The first quarter will be the low quarter for 1958—though the third may not be a great deal better.

- **Detroit View**—What's the comparable Detroit guessing? About now, it runs like this:

- Over-all domestic production of 6.1-million cars next year.

- Production of about 1.6-million cars in each of the first two quarters—assuming, of course, no auto strike in June.

- Sales next year of about 6-million cars—of which at least 200,000 will be imports.

On such a basis, it's pretty puzzling why steelmakers find the dearth of orders from Detroit so much more appalling than other phases of their business. For if Detroit comes close to its own forecast—and it's a conservative one—just about as many cars will be built in 1958 as in 1957. And they'll be built on the same steady schedule as they were in 1957.

- **Nothing to Cry About**—Plainly, about the same number of cars in 1958 as in 1957 will take about the same amount of steel in 1958 as in 1957.

That won't assure steel of a fat auto year, but it won't make it a poor one at all.

Actually, it's quite possible that the same auto volume in 1958 as in 1957 will require more steel shipments than did 1957, for auto producers have been cutting their steel inventories much of the past year. It may be that Detroit still has some steel inventory-paring left to do—but steelmen would be almost the last people to know that with any certainty. Still, there can't be as much inventory left to pare as there was last May—not if 1958 production is to match that of 1957.

- **Real Worries**—The fact that the steel business is pointing at the wrong bogeyman doesn't mean, however, that there's nothing else to make its hair stand on end. Actually, there are several other scarecrows. For example:

- Not a single steel product is booming today—nor are any boom items in sight in the first quarter.

- Two markets—autos and warehouses—that represent about 40% of the shipments are on a hand-to-mouth basis at best. Autos may still be cutting inventories. Warehouses doubtless would love to.

- Oil country goods, one of steel's dandies that have been strongest longest, are just getting into what looks like a fairly severe inventory drawdown. You can hear chatter in the steel industry about a 45% cut in stocks—at a time when there's more capacity than ever.

- **Wrong Guess**—Perhaps most maddening to steelmakers today is the realization that they are hoist by their own petard. Somehow, they had figured that the fourth quarter of 1957 would be a daisy. So they worked pretty hard, in what otherwise would have been a slow third quarter, to build mill inventories of semi-finished steel against that surging fourth-quarter demand. It didn't come. Now steel, too, is cutting inventory.

As a result of all this, there have been

some striking changes in steel industry guessing about the future. Not long ago, well-informed steelmen were betting that the drawdown of steel inventories would extend only through the first quarter. In the second quarter, they predicted, steel inventories would hang around aimlessly, neither rising nor falling. The third quarter would bring some acceleration in activity, and the fourth quarter, a strong start at rebuilding inventories.

Today, it doesn't read quite that way. Rather, it calls for a drawdown through the second quarter, followed by a desultory summer. A pickup now must wait till fall.

- **Days of Sunshine**—Still, for those steelmakers who can avoid schizophrenia over the shocking collapse of the operating rate that started last month things are by no means all black.

- Consumption of steel this year will set an all-time record—estimated at about 83.5-million tons.

- And for 1958, the feeling remains that consumption will come very close to the 1957 record.

Ironically, the collapse of the 1957 operating rate may have lanced a boil that irritated steelmen no end a few weeks ago. At that time, they were pretty upset about the fact that the 1958 capacity figure, when it's announced early next month, would show such growth that the operating rate would show a sharp drop even if ingot production remained the same.

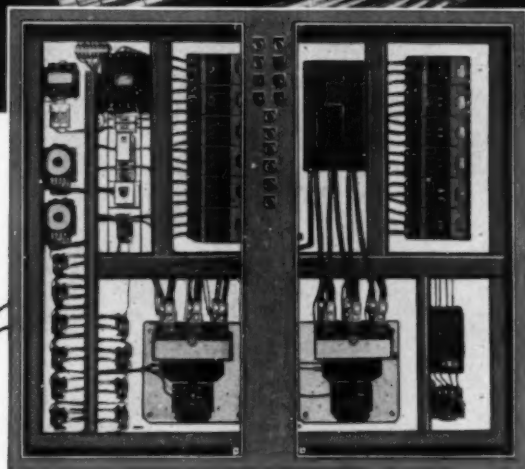
Now it's clear that the drop will be much less pronounced. If you assume that there'll be 140-million tons of capacity in place next year—and it could be more than that—you can calculate that it would take a 63% operating rate to produce as many ingot tons in January as will be produced this month.

That would be an embarrassing drop from, say, 73%. But the last couple weeks of December will be far below that figure—and not very far above 63%.

- **New View**—So, today you hear much less grumbling about the 1958 operating rate. Mostly, what you hear is stern self-examination about where the orders will come from to let January produce a few more tons than December.

And, if you like to speculate, steel's first quarter doesn't look really terrible. For example, if you can assume that the 90-day first quarter, which has only one holiday, will produce only as many tons as the 92-day last quarter, which has two holidays then a 140-million ton capacity for 1958 would yield a 72.4% operating rate. That wouldn't look bad at all beside what the fourth quarter will show.

FANNON infra-red quartz ovens



The control used with this infra-red quartz oven manufactured by Fannon of Detroit, Michigan, provides automatic control of conveyORIZED processes. With each installation designed for the "job" to be done, each control panel is special. These special control panels use standard Allen-Bradley components listed in the A-B Handy Catalog. Thus, "special controls" cease to be a headache.

ALLEN-BRADLEY
MOTOR CONTROL

QUALITY

factory equipped
with **ALLEN-BRADLEY**
Motor Control



When you specify Allen-Bradley motor control for your production equipment, you obtain insurance against trouble...even costly inspection is eliminated. That's the reason Allen-Bradley control is preferred over all other makes...as independent surveys have shown time after time.

This recognized superiority of Allen-Bradley motor control stems from the simplicity of its solenoid design...the control with only *one* moving part. By eliminating bearings, pivots, and pins that corrode and stick, as well as flexible jumpers that wear and break, you are assured millions of trouble free operations. And the double break, silver alloy contacts...*standard* on all Allen-Bradley motor control...never need service attention. This is just another instance where Allen-Bradley design has eliminated a possible source of trouble.

Standardize on Allen-Bradley—the *quality* motor control. Its *proved* reliability not only costs you no more—you get more for your money!

Allen-Bradley Co., 1332 S. Second St., Milwaukee 4, Wis. In Canada: Allen-Bradley Canada Ltd., Galt, Ont.



CAMERON COBBOLD, governor of the Bank of England, has no outside job, but...



LORD KINDERSLEY heads several firms besides being a top director of the Bank.

London's Bank Rate Fuss

In Britain this week, a solemn tribunal is rounding out an investigation into alleged "leaks of information" prior to the dramatic rise from 5% to 7% in the bank rate, announced by the Bank of England on Sept. 19.

The investigation has kept London financial circles buzzing with excitement since it began more than three weeks ago, partly because of the parade of top bankers (pictures) and officials who have taken the witness stand. And the investigation has had political overtones—with Labor Party leaders hoping to reap political gains.

• **Dual Capacity**—In fact, the tribunal has raised an issue much broader than the one of who might have benefited from prior knowledge of the impending bank rate rise. The key question is whether there is a conflict of interest when a private banker serves in a public capacity on a government board such as the Bank of England's "court of directors."

Several key directors of the Bank of England are also top men in private banking houses. Lord Kindersley (picture), called before the tribunal, is head of the well-known merchant banking house of Lazard Bros. & Co., "governor" of the Royal Exchange Assurance Co., and board chairman of Rolls Royce—as well as being a director of the Bank of England. William Johnston Keswick, another witness, also serves in a dual capacity—as a Bank of England director and as head of Matheson & Co., London agents for one of Britain's most famous trading houses in the Far East.

• **Discount Hike**—On Wednesday, Sept. 18—a day before the Bank of

England hiked the discount rate from 5% to 7%—four banking firms, including those of Lord Kindersley and Keswick, sold large amounts of the government bonds in their portfolios.

Normally, when the discount rate rises, other interest rates follow upward, and prices fall. Thus, the investigating tribunal has questioned these financiers—serving a dual role as private bankers and directors of the Bank of England—on whether they indiscreetly "leaked" information on the pending rate rise to their own banks—to save them from losses on their bond holdings.

The question is by no means new in British government and political circles. In recent times, there have been three well-publicized cases:

• In 1936, Jimmy Thomas, at that time a leading figure in the British Labor Party and also Secretary of State for the Colonies, disclosed an impending change in the excise tax to a family relation. A company headed by this relative made a profitable financial deal the day before the Chancellor of the Exchequer announced the tax change. Thomas, investigated by a tribunal, resigned—and, in fact, disappeared from public life.

• In 1947, Chancellor of the Exchequer Hugh Dalton told a correspondent of a London paper about tax changes a half-hour before making the official announcement. The newspaper stopped its presses and slapped the news on the front page, so the edition hit the streets about the same time Dalton was talking in Parliament. Prime Minister Atlee fired Dalton at once.

• **Not Much Fire Yet**—The present

tribunal so far has heard nothing to suggest a full-fledged scandal, although the hearings may yet produce some surprises. But, judging from the evidence to date, none of the bank directors appears to have given information—directly, at any rate—to his own firm as a basis for deciding whether or not to sell government securities.

However, a number of government bond dealers have testified that they thought some people were selling on secret information. Trading went on after the market closed on Wednesday, and, as one dealer put it, "I was surprised they accepted such a low price without haggling or arguing."

There is no blinking the fact that there was some "inspired" selling before the Bank moved, but it was difficult to determine whether it was just smart guesswork or an actual tip. Keswick himself admitted advising his firm three days before the announcement to unload British securities and to buy American ones, even though, as a bank director, he had a moral responsibility for keeping sterling strong.

Moreover, Chancellor of the Exchequer Peter Thorneycroft may be in for some criticism because he informed Conservative Party Chmn. Oliver Poole and two top management and union organizations of various austerity measures in the making.

Some critics propose a law that private businessmen be barred from serving on government policy boards. But most of the witnesses, so far, have pointed out that, by having private bankers on its directorate, the Bank of England can keep in closer touch with over-all business conditions.

• **Clearer Line**—Whatever the tribunal may decide, it's almost sure that the British public will demand a clearer division between the full-time professionals, such as Cameron F. Cobbold (picture), the Bank's governor, and the part-time directors with outside jobs. To make this division clearer, the Bank of England is likely to take a closer look at its American counterpart—the Federal Reserve Bank.

In the U. S., the boards of the district Federal Reserve banks, which influence the decisions of the Fed in Washington, include local bankers and businessmen. But the top board in Washington consists of men who, while serving on the board, do not hold outside jobs.

Even if the Bank of England makes no basic structural changes, the practice of altering the bank rate only on Thursdays may well be abolished. Much of the evidence at the tribunal has turned on the fact that The City knew an important government statement was likely to be issued on Thursday—and any bank clerk could have assumed this meant a rise in the discount rate.



Relieves traffic congestion. To handle the ten million cars a year which now funnel onto the 3-lane Carquinez Bridge, (right) the State of California is building this second bridge connect-

ing the San Francisco Bay area and the Sacramento Valley. Use of nickel-containing USS "T-1" Steel in critical truss members has simplified design...reduced unnecessary weight...saved money.

A tale of two bridges ...and an \$800,000 saving

Twins? Almost.

But there are two differences. The span on the right is 30 years old. Her sister is brand new.

Another big difference is in their construction materials. The most highly stressed truss members of the new bridge are USS "T-1" Steel ... a high yield strength constructional alloy steel containing nickel.

"T-1"®, produced by United States Steel Corporation, has nearly three

times the yield strength of structural carbon steel. It is at least four times as resistant to atmospheric corrosion. And it can be welded with relative ease.

It reduces weight and simplifies design.

According to computations by the State of California, "T-1" Steel will save approximately \$800,000 in construction costs.

Are you looking for weight saving

... added corrosion resistance ... dependable strength? A nickel alloyed steel may be just what's needed to improve whatever you're making or building. Let us help you find out. Here at Inco, you can get counsel and data based on years of specialized experience with alloys containing nickel.

"T-1" is a registered trademark of United States Steel Corporation. "T-1" Steel is produced by United States Steel Corporation and its licensees, the Lukens Steel Company.

The International Nickel Company, Inc.

67 Wall Street



New York 5, N. Y.

INCO NICKEL

NICKEL ALLOYS PERFORM BETTER, LONGER

In Business

• • •

C-of-L Index in Unexpected Leap, Brings 5¢-an-Hour Raise in Steel

The Labor Dept.'s Consumer Price Index climbed in mid-November to a record 121.6% of average 1947-49 costs, an unexpected half-point rise from the previous month's level of 121.1% (BW—Nov. 30 '57, p131).

The new CPI level will mean a 5¢-an-hour wage increase for the nation's steelworkers, effective Jan. 1 under "escalator" contracts with semi-annual adjustments. This is at least a penny more than the industry had expected, and brings total living-cost pay increases to 12¢ since steel contracts were signed in mid-1956 (BW—Nov. 9 '57, p162).

The hefty rise in the latest CPI was largely due to increased auto prices; the transportation component in the index soared by 3.1%. Food prices dropped.

• • •

Late Shopping Rush Stirs New York To Hope Sales Will Match '56 Season

Christmas shoppers flooded back into New York City this week to give strike-battered merchants renewed hope that sales for the whole season would at least match last year's.

The break came on Dec. 14 when, with the subway strike easing toward its end and the bad weather slackening, sales climbed to a record for a Saturday. Macy's said it had the first \$2-million day for a single store in retailing history. The pace continued on Monday, and by Wednesday, one big specialty house admitted, "We're optimistic—we think we will equal December last year."

All along, suburban branches and stores helped reflate the city figures shriveled by the subway strike. Bamberger's in New Jersey reported its first \$1-million day, and other stores told of skyrocketing sales. But the potential capacity of the suburban stores wasn't enough to offset the city's daily losses, which some estimated anywhere from \$1-million a day to more than \$2-million.

• • •

Du Pont Hits Polyolefin Jackpot, Wins Overriding Patent on Hot Plastics

Du Pont's patent lawyers this week wiped canary feathers from their whiskers. Safe in their briefcases was an overriding "composition of matter" patent that gives du Pont exclusive right to make or license the making of the family of hot new plastics known as linear polyolefins. Included in that tribe are the linear polyethylenes (BW—Feb. 23 '57, p94) that are already being produced to the tune of 150-million lb. per year, at

approximately 47¢ a lb. under several process patents.

The beauty of du Pont's "composition of matter" patent is that it applies, no matter what process is used to make the material, provided that the molecular arrangement of the end product is the same.

In this case, the du Pont patent overrides a whole snarl of claims for process patents for making linear polyethylenes and polypropylenes, with such contestants as Karl Ziegler, Phillips Petroleum, Standard Oil (Indiana), and Montecatini. Du Pont itself holds a license for the Ziegler process.

To get the overriding patent, du Pont persuaded a federal court to reverse a patent office refusal. The decision apparently stunned the chemical industry, although du Pont for years had been claiming rights to the material and offering licensing agreements. Phillips Petroleum said it did not believe du Pont's patent would affect Phillips and its licensees.

• • •

Business Briefs

GM's Buick Div., whose sales have been way off, is severing its 23-year tie-up with the Kudner Advertising Agency. For Kudner, it means the loss of \$24-million in annual billings—a third of the agency's total. For Buick, according to trade surmises, it heralds a shift in merchandising technique.

Noting a "temporary oversupply" of aluminum, Kaiser Aluminum & Chemical Corp. has postponed "indefinitely" the start of alumina production at its unfinished \$60-million Gramercy Works, 40 miles from New Orleans.

With Canadian unemployment up 40% in mid-November over mid-October, the government is taking at least one step to help out. Ottawa and British Columbia will put up \$20,000 between them to permit continuation of limited production of copper by Howe Sound Co. at Britannia, B. C., an isolated spot with no other source of jobs.

In a move to bolster the teaching of science and engineering, the Esso Education Foundation is spreading grants totaling \$500,000 among 84 privately supported colleges and universities in the U.S.

Cuts of 20% on certain days for night air coach excursion fares are sought by National Airlines, in an effort to get a more evenly balanced day-to-day traffic volume. If CAB approves, the cuts will go into effect between Florida and five northern cities.

The ICC has ordered nine truckers in the Southwest and Midwest to stop honoring "hot cargo" clauses in contracts with the Teamsters union. The order is sure to be tested in the Supreme Court, which has already accepted four other hot cargo cases for review.

The Shippingport atomic electric plant last Wednesday produced its first power, just 16 days after the self-sustaining nuclear reaction was started (BW—Dec. 7 '57, p32).



New Package ... *Greater Profits*

American manufacturers are continually working out new packaging for their products. The objective: higher profits through reduced handling costs, less damaged goods and added sales appeal.

Packaging is just one of the areas of man-

agement planning where wise expenditures can improve earnings. The officers of The Bank of New York are helping many progressive management teams with their plans to "wrap up" greater profits. They will be happy to work closely with you and your organization.

THE BANK OF NEW YORK

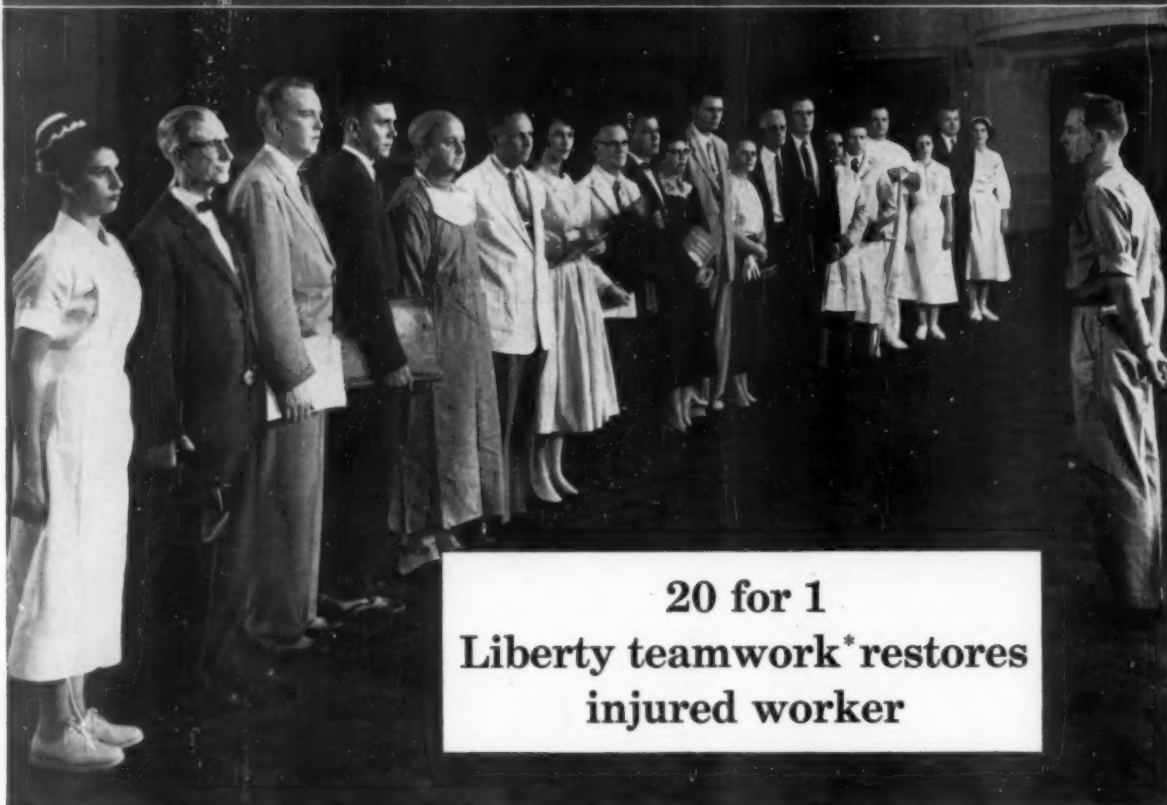
New York's First Bank • Founded 1784

Main Office: 48 WALL ST. ☆ Uptown Offices: 530 FIFTH AVE. ☆ MADISON AVE. AT 63rd ☆ MADISON AVE. AT 73rd

Member Federal Deposit Insurance Corporation

LIBERTY MUTUAL®

The Company that stands by you®



20 for 1 Liberty teamwork* restores injured worker

LAST YEAR, Henry W., employed by a policyholder of Liberty Mutual, had a crippling accident at work in which he lost one leg.

Twenty different professional and technical people were on the team needed to carry out his medical and rehabilitation program. These included physicians, surgeons, nurses and rehabilitation specialists, of whom 14 were on Liberty's payroll. Their work

led to Henry's fine recovery. He is back on the job, adjusted to his disability and now earns more than he did before.

Liberty's method is to spread an "umbrella of care" over the injured worker. This Liberty teamwork not only benefits your employee but also reduces the chance of prolonged disability and increased cost of compensation insurance.



HOW TO REDUCE THE COST OF COMPENSATION INSURANCE. The story of Liberty Mutual's comprehensive Medical and Health Program is told in a book that is yours for the asking. Just phone or write any Liberty Mutual office.



LIBERTY'S "EXPENSE RATIO" on Workmen's Compensation is lowest of any general casualty company operating nationwide. Liberty has returned \$422,111,000 in dividends to policyholders. For 20 years—the nation's largest writer of Compensation.

*From left to right: Plant Nurse, Plant Physician, Claims Supervisor, Claims Representative, Surgeon, Internist, Medical Secretary, X-Ray Specialist, Orthopedic Specialist, Nurse Counselor, Vocational Counselor, Rehabilitation Nurse, Medical Adviser, Examiner, Certified Prosthetist, Limb Maker, Physical Therapist (Ambulation), Physical Therapist, Rehabilitation Center Administrator, Occupational Therapist.



LIBERTY MUTUAL INSURANCE COMPANY
LIBERTY MUTUAL FIRE INSURANCE COMPANY
Home Office: Boston

Insurance for: Workmen's Compensation, Group Accident and Health, Automobiles, Liability, Fire, Marine, Crime

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
DEC. 21, 1957



The bite of urgency in Washington is sinking deeper. It is becoming more apparent that military spending is going up next year—even more than the \$1-billion to \$2-billion the Administration acknowledged after the Soviets launched Sputniks No. 1 and No. 2. The pressure on the Administration to “get cracking” is increasing from Eisenhower’s supporters, as well as from Democrats. And, as a consequence, some of the civilian agencies are beginning to feel the pinch of the military urgency as a pressure to cut back on regular programs.

Take the events of the week, one by one:

The rejuvenating of NATO—the North Atlantic Treaty Organization—limited as it may be, is still a personal triumph for Pres. Eisenhower; he wanted it badly, was determined to go to Paris personally to win consent of the Western Allies to grant missile bases. Washington is convinced that the President, alone, won the day, overcoming the fears of the Western European nations, fears fed by the Soviet missile successes.

The victory will have its price. Our defense budget will reflect the cost of putting missiles and atom stockpiles abroad; but additionally, our foreign aid spending, military and economic, will increase. It’s likely we will commit our strategic bombers to more frequent missions abroad to reassure the NATO powers that we are defending them. It’s likely that our Navy forces, under NATO command, will become more active in the Atlantic, for greater reassurance.

Democrats, moreover, claim they have found Administration weakness in development of advanced weapons to match the Russians. Criticism is multiplying that Eisenhower lacked the sense of urgency to keep up.

The extent of the budget overhaul will be decided next week. Eisenhower and Budget Director Brundage then will initial the entire budget for the printers—to be sent to Congress in mid-January. On the up side, we know this:

ICBM effort—the intercontinental ballistic missile—will go up.

Production of B-52 bombers probably will go up.

Money for testing of missiles will be increased.

Incentives for scientific education and training will increase.

—•—

The pressure to increase military effort comes from all sides. You have to expect it from the uniformed brass; and from Democrats who see the Sputnik issue in both security and political terms. But a substantial push for a bigger sense of urgency comes from the many businessmen supporters of Eisenhower. Some of them are now the loudest in arguing for really large increases in spending.

Here is the reasoning of these people: They applaud the President’s success in Paris. But they see the need for still more effort at home.

The Gaither group is the crucible of the businessmen’s effort. This is the committee that recently reported to the President on what should be done, abroad and at home, about U. S. defense. The White House is not

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
DEC. 21, 1957

going to release the report of the committee, headed by H. Rowan Gaither. Consequently, little is known about its details. Last week V.-P. Nixon met with the group and got the import of the individual views. Some major conclusions are known.

Individually, these men want a big increase in spending. The figure goes as high as \$60-billion a year, as against this year's \$38-billion to \$40-billion. They want to earmark the money for missiles, for foreign aid, with the accent on economic aid, and for education of U.S. scientists. They represent the "breakthrough" group, and they want to make their influence felt widely.

The group wants the next move to come from Eisenhower. Many of them are willing to become a latter-day "Committee to Defend America by Aiding the Allies." That was the William Allen White committee that worked for U.S. intervention before Pearl Harbor.

—●—
Cutbacks in civilian spending are beginning to show. The last decisions at the Budget Bureau plainly show that the Administration, at least, is going to be hard on nonmilitary programs. And Administration officials feel that the President, fresh from the military and diplomatic talks in Europe, will come home with a sharp-pencil attitude toward the "frills" of government.

A moratorium on new flood control projects has been ordered.

All new water control projects—the pork barrel the politicians talk about—are not going to be put up for bids. Some hundreds of millions of dollars of contracts are involved. The Bureau of Reclamation, as well, is going to delay construction of the Flaming Gorge and Navajo Dams on the Upper Colorado River.

The federal school construction program is being downgraded. That was a \$200-million budget figure in the Administration's budget this year, although Congress refused to vote the legislation. Now, the Administration is not going to push the program, and perhaps will not even endorse the idea of federal aid to the states for schools. Bear in mind, however, that although the Administration is no longer pushing for school buildings, a lot of aid to education will show up in Administration proposals carrying a military label.

New social security legislation will be sacrificed. Pressure had been building to bring medical and surgical care inside the pension program; now the plan will be dropped.

Farm price support outlays will be cut, if possible. The Administration is realistic enough to know that subsidies will have to continue; but every effort will be made to reduce the \$5-billion item.

—●—
Still and all, nonmilitary spending won't offset the increase for military programs. The budget will go to Congress in January with a delicate balance between spending and revenue—without even the \$1.8-billion cushion of this year.

So, tax cuts are out. Debt reduction is out. A deficit is possible. Congress will continue the 52% corporation income tax, the Korea-born excises, and the highway user taxes next year. Only a severe downturn in business would change things.



"JOY TO THE WORLD"... wrapped in paper

The postman sees it happen all through the year. But most of us notice only as the holiday season approaches how paper, important in so many ways, plays an indispensable part . . . to help us express our kindest feelings . . . to wrap gifts with extra affection.

Because DIAMOND ALKALI's caustic soda, chlorine, soda ash and other

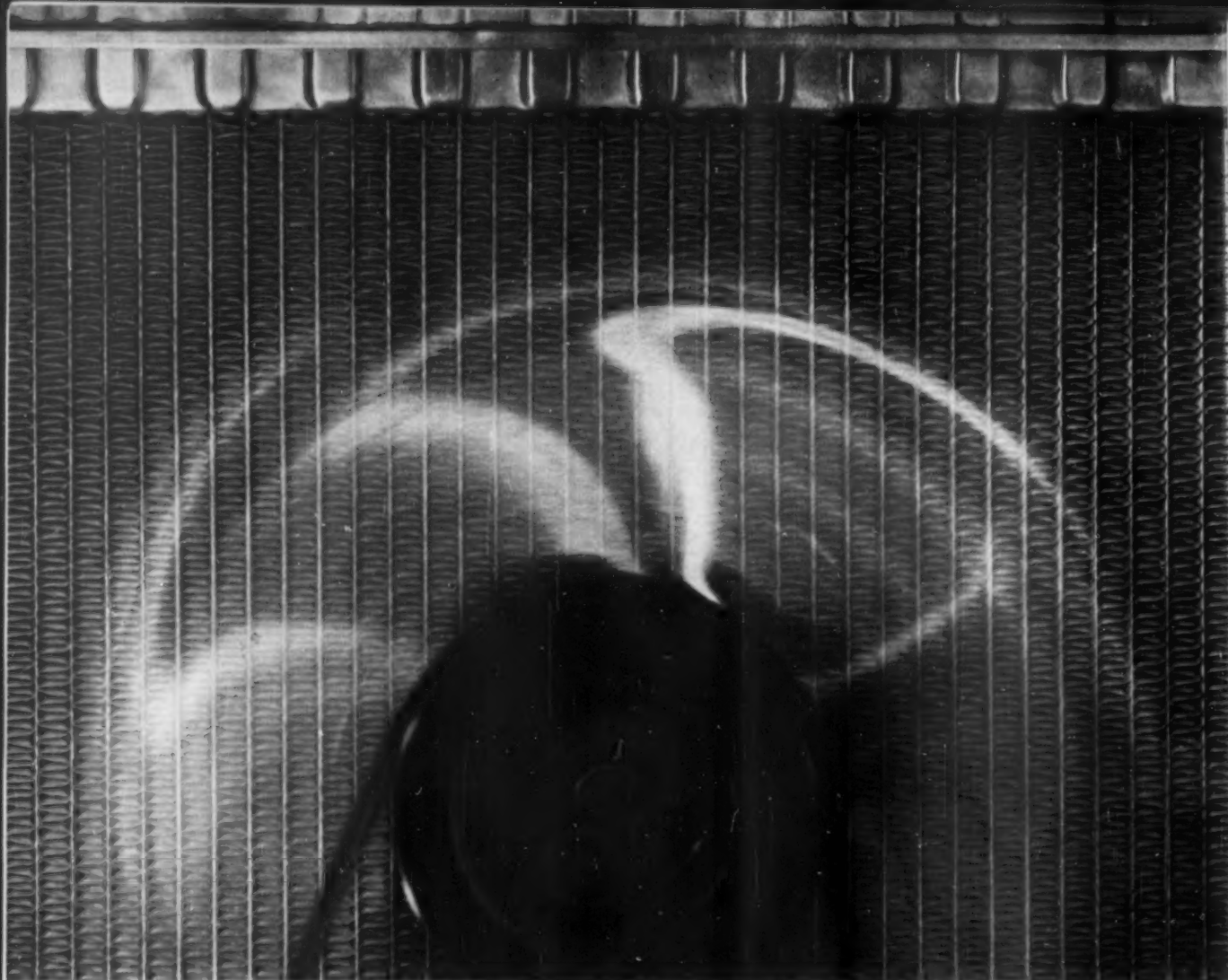
"Chemicals you live by" are basic to the production of paper, we share an interest in the growth and improvement of papermaking.

To that end we have established a new research laboratory devoted exclusively to pulp and paper technology. A special staff . . . a separate building . . . our present to an industry that is so important to us all.

DIAMOND ALKALI COMPANY, Union Commerce Bldg., Cleveland 14, Ohio.



**Diamond
Chemicals**



Water at nearly 250 degrees F, under about 15 lb. pressure, enters flat vertical tubes of brass, which extend back through the radiator core. Crimped, paper-thin copper bonded to the tubes dissipates engine heat to air flowing through the radiator.

How copper makes it easier to cool today's hot engines



Modern high-speed rolling mill specially installed by The American Brass Company to produce radiator copper.

THE PROBLEM: As horsepower and compression ratios zoomed during the last few years, automobile radiators and cooling systems had to get rid of more heat. At the same time, car silhouettes grew lower — accessories multiplied. Finally, there just wasn't room under the hood for conventional radiators, big enough to do the job.

THE SOLUTION: Radiator designers went back to fundamentals. The greater the temperature difference between radi-

ator water and the outdoor air, the more heat the radiator can toss off. So these engineers allowed operating temperatures to rise about 50 degrees (under hot weather driving conditions) by running the cooling system under pressure. Now, an even lighter and more compact radiator can get rid of engine heat at a rate to keep four 6-room houses comfortable in zero weather.

Having the highest heat conductivity among commercial metals, copper and copper alloys help keep radiator size to the minimum. Even at higher temperatures, they give the needed resistance to corrosion from the atmosphere and from water and antifreeze solutions. And, be-

cause these metals are so easy to form and join, they also make possible economical mass production.

THE FUTURE: Through the years, Anaconda technical men have been working closely with auto and radiator manufacturers. With each advance in design, these specialists helped provide the precise metal products to meet the new needs. So too, Anaconda and its manufacturing companies can help you meet your ever-changing requirements. Whether you need copper and copper alloy mill products or wire and cable of copper or aluminum, call the *Man from Anaconda*. The Anaconda Company, 25 Broadway, New York 4, N. Y. 87264

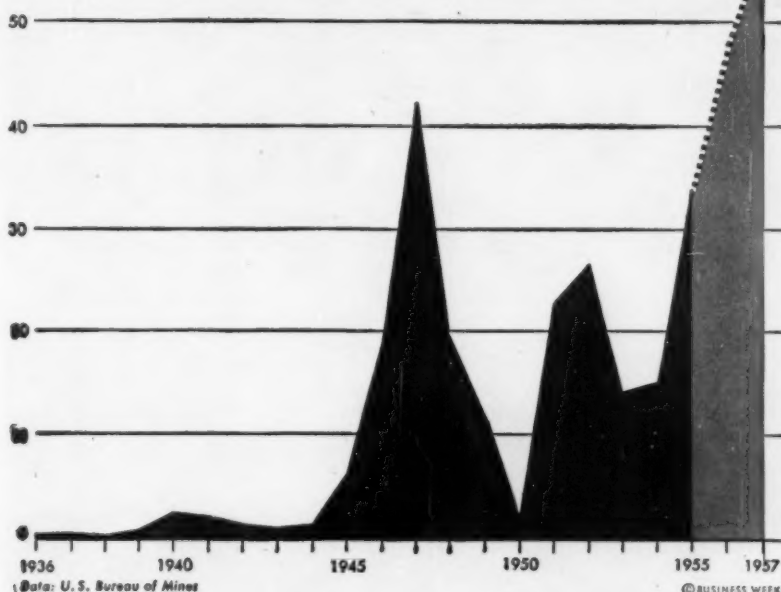
ANACONDA®

THE AMERICAN BRASS COMPANY—ANACONDA WIRE & CABLE COMPANY

INDUSTRIES

Millions of Tons
60

Bituminous Exports Soar Again



And This Market May Last

As bituminous coal production moved this week toward an estimated yearend mark of 492-million tons, the industry was casting a grateful look at its overseas export market. Virtually assured of swelling to a 58-million ton crest this year, overseas trade is moving up into fourth place among the coal industry's big-time markets (power, steel, industrial, export, retail, Canada). Export tonnage represents nearly 12% of coal's entire bituminous production, is at an all-time high.

• **How Long Will It Last?**—For most coal producers, however, the real test of the overseas market is not how much tonnage but how long it will last. Some of them remember too well the sharp climbs and drops of former overseas markets (chart). Others, conditioned by the losses of the railroad and home heating markets in the last decade, are cautious about any new trade buildup.

Generally, though, most industry leaders are satisfied that the export market is here to stay for at least 10 years. They reason this way:

• 75% of the coal going overseas is metallurgical coal to feed the steel-making furnaces of Europe and the rest of the world. Thus, coal's chief competitor—oil—is no competitor here.

• The export market is based on a worldwide and growing demand for energy. Although vulnerable to competition from oil (and eventually from

nuclear power) among power customers, coal is counting on hard-sell marketing tactics and its vast reserves of steam coals to hold its market share.

• Previous suppliers (such as Great Britain and Poland) are no longer able to deliver big tonnages. Only the U.S.S.R. and China contain enough untapped, easily mined reserves to threaten the U.S. market. And their threat is remote.

• **Europe's Need**—The Southern Coal Producers Assn., whose members mine 90% of the coal that is moving overseas, says through its president, Joseph E. Moody, "the demand looks as if it might continue indefinitely."

The European Coal & Steel Community tends to confirm Moody's remark about "indefinite demand." The ECSC, which used 107-million tons of metallurgical coal in 1955, is predicting it will need 123-million tons by 1960, 137-million tons by 1965, and 158-million tons by 1975. The coal needs of electric generating stations are expected to increase from 45-million tons in 1955 to 60-million in 1960, and 86-million by 1975.

• **Europe's Supply**—Facing the ECSC, moreover, are these three facts of life:

• Europe's own production has risen very little, principally because of a lack of manpower. Excluding the U.S.S.R., European countries mined approximately 425-million tons of coal

in 1955, the latest year for which figures are available.

• Coal reserves are so deep in the ground, and mining conditions so difficult, that capital requirements are a bar to new mine development.

• European mines produce only 1½ to 2 tons per man-shift (in the U.S., the rate is approximately 10 tons).

Summed up by Coal Age and the Keystone Coal Buyers Manual, two McGraw-Hill publications that track the ups and downs of the coal industry, the European facts of life add up to this: "Barring a general slump in the world's industrial economy, exports will continue at a high level."

• **But How High?**—It is only on how high the "high level of exports" will go that men closely connected with the industry disagree. Keystone's general manager, Joseph R. Forsythe, forecasts a maximum of 70-million to 75-million tons. He also predicts a 4-million or 5-million ton drop in 1958, mainly among heating coals, because of Europe's warm winter earlier this year.

"As Europe burned less coal for heat last winter, imported at a record rate, and mined at a normal rate, stockpiles built up," he says. "The buildup is showing up now among final-quarter export tonnages, which are lower despite the fact that winter's here again."

Walter J. Tuohy, president of the Chesapeake & Ohio RR., a major coal carrier, forecast an eventual 100-million-ton market nearly two years ago. This week, he says: "There is nothing in the picture now to change my mind." He agrees, though, that periodic, minor cycles of decline will occur.

• **Self-Sufficiency**—To some thoughtful men connected with the coal industry, the high rate of export—draining our natural resources—is causing some trepidation. They ask: How will a continued high rate of coking coal exports affect our own metallurgical coal needs?

There is no answer, only speculation. The nation's supply of quality coking coal, a quality based on an absence of ash and sulphur, is estimated to be 1% of bituminous reserves. Compared with the 1-trillion tons of all bituminous, even 1% becomes a huge amount. However, only 25% of total reserves are estimated to be in deposits more than 28 in. thick and less than 2,000 ft. below the surface.

Thinner and deeper deposits can be mined only at greater expense. But, less than two years ago, the coal industry began demanding and getting mining machines for big-scale operations at thin-seam mines. To conservationists, who point out that mining hard-to-get-at coal has reduced the British from a major coal exporter to a coal and oil importer, the thought occurs we may be depleting our own supplies of metallurgical coal to make a fast buck. **END**



Roland Gohlke, Dow Chemical Company engineer, using the new Bendix Time-of-Flight Mass Spectrometer.

HOW THIS AMAZING NEW BENDIX INSTRUMENT CUTS COSTS FOR CHEMICAL COMPANIES

When high-volume chemical processors have to shut down production when bad batches occur, they lose money in direct proportion to the length of time it takes to find out what's wrong with the mix.

The Dow Chemical Company has been using a new-type Bendix Time-of-Flight Mass Spectrometer to help solve this problem. This amazing instrument "fingerprints" or identifies all the ingredients in a mix instantly, including impurities which may be present. Corrective action can

thus be taken quickly and regular production resumed with minimum loss.

This new Bendix instrument is the fastest mass spectrometer ever designed. Dow uses it in conjunction with relatively inexpensive accessories and gets faster results than conventional mass spectrometers can produce. In research, a problem which once took Dow three months to solve was solved by the Bendix mass spectrometer in four hours! Dow reports the instrument to be remarkably trouble-free—only four hours of down-

time out of 800 hours of operation.

In addition to Dow, the Bendix mass spectrometer is being used by other major chemical companies, leading universities and government agencies including The U. S. Bureau of Standards. To cut costs for you as it is doing for others, why not check to make sure your laboratory people are up to date on this development? For complete information, write direct to our Cincinnati Division, 3130 Wasson Road, Cincinnati 8, Ohio.

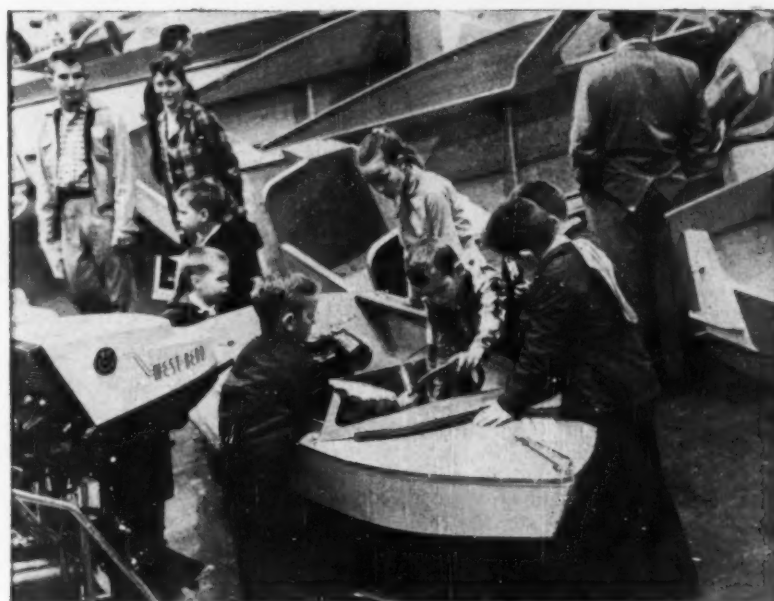
A thousand products



a million ideas



Detroit Styling for Smart Set...



... And Designs for Small Fry, Too

More than ever before, the Northwest Boat Show at Seattle—first of the winter circuit of boat shows—called attention to the influence of Detroit automobile styling on motorboat design (pictures). This influence has been growing for two or three years, in “hardtop” cockpit enclosures (top) and tail fins (right).

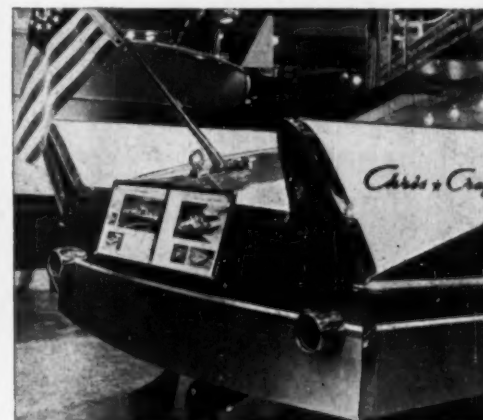
The Seattle show, in its 10th year, drew 62,244 paid admissions—nearly 20% above last year's previous record high. To the distress of old-school yachtsmen who think a boat should look like a boat, the biggest crowds formed around the speedboats that look most like 1958 autos.

There was one refreshing exception

to this cult of Detroit—youngsters gathered in droves around a simple, boatlike boat (above) that is powered by a lawnmower-type inboard engine.

• **Plastic Design**—The auto-style trend is attributed to (1) the hot competition among the makers of the smaller boats (up to 22 or 24 ft. long) that is driving them to change the outward appearance every year or so, and (2) the greater use of metal and glass-fiber plastic, which lends itself to the curves and rounded corners of Detroit auto design.

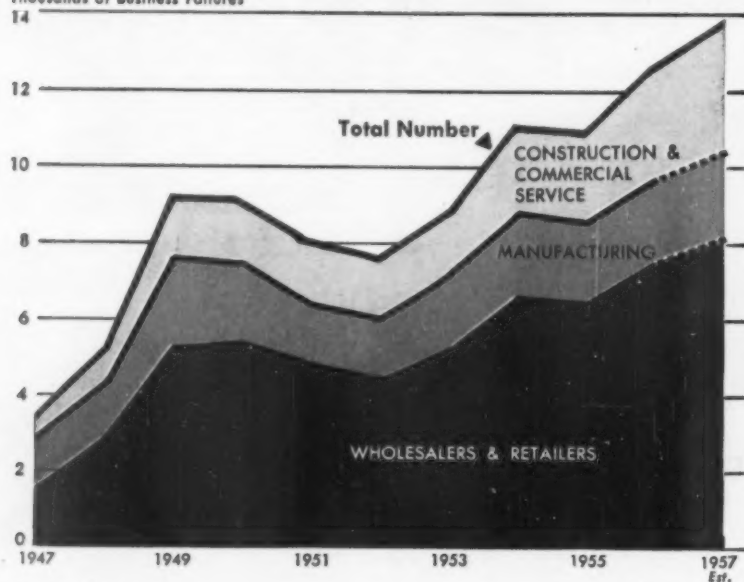
Visitors to the show were often heard playing the game of guessing which boat design treatment was suggested by which family of automobiles. **END**



TAIL FINS on similar theme by—top to bottom—Banshee, Bryant, Chris Craft, and Mansfield, on speedboats at Seattle show.

Bankruptcies Keep Rising...

Thousands of Business Failures



Data: Dun & Bradstreet

© BUSINESS WEEK

Shaking Out Weaklings

The number and rate of business failures keeps rising, as usual, when boom times lure the inexperienced to try their hands.

The proprietors of a small restaurant on Manhattan's bustling Lexington Avenue are still wondering what hit them when they went bankrupt last week. For 10 years they had been operating at a tidy profit. Then this year, costs kept leaping upward, while customers grumbled at every boost in prices on the menu. Waitresses and counter men came and went in a steady stream; service deteriorated. Volume began to shrink. Suddenly, the bills became overwhelming, and the restaurant was inextricably mired in debt.

This abbreviated story of the rise and fall of one small business is part of the larger tale told in the chart above. Dun & Bradstreet, Inc.—which has long assigned itself the task of keeping track of the nation's business casualties—says that some 13,700 businesses will have gone under by the close of 1957. This is an 8% rise over the 12,686 failures in 1956. Back in 1947, a total of only 3,476 businesses went into bankruptcy.

• **Higher Rate**—The rate of failures has been rising, as well as the total. This year, 52 businesses failed out of each 10,000, while in 1947, only 14 out of each 10,000 fell by the wayside.

What's more, these figures do not cover all businesses that gave up the struggle for existence. The D&B tally covers only cases that involve losses to creditors. It does not include concerns that liquidated voluntarily and paid whatever obligations were outstanding at the time they closed shop. Other companies escape bankruptcy or liquidation by merging with healthier concerns. D&B reckons that in each of the last several years, something between 350,000 and 400,000 concerns were discontinued, and were replaced by an almost equal number. The total number of U.S. businesses in existence at the moment is hovering around 4.2-million.

All through the postwar period, business casualties have been rising in the face of a booming economy. Indeed, failures usually increase steeply when business tides are running high. That's because the entrepreneurial urge beats more strongly when business is good and the future rosy. This rush to be a boss lies at the root of most of the nation's business failures.

• **Inexperience**—D&B reports that 90% of business failures can be chalked up to inexperienced and incompetent management. Boom times lure the neophytes into business, giving them the hope that they will learn as they go while being supported by the general prosperity. In real life, business just doesn't work that way. As business grows more complex, managerial know-

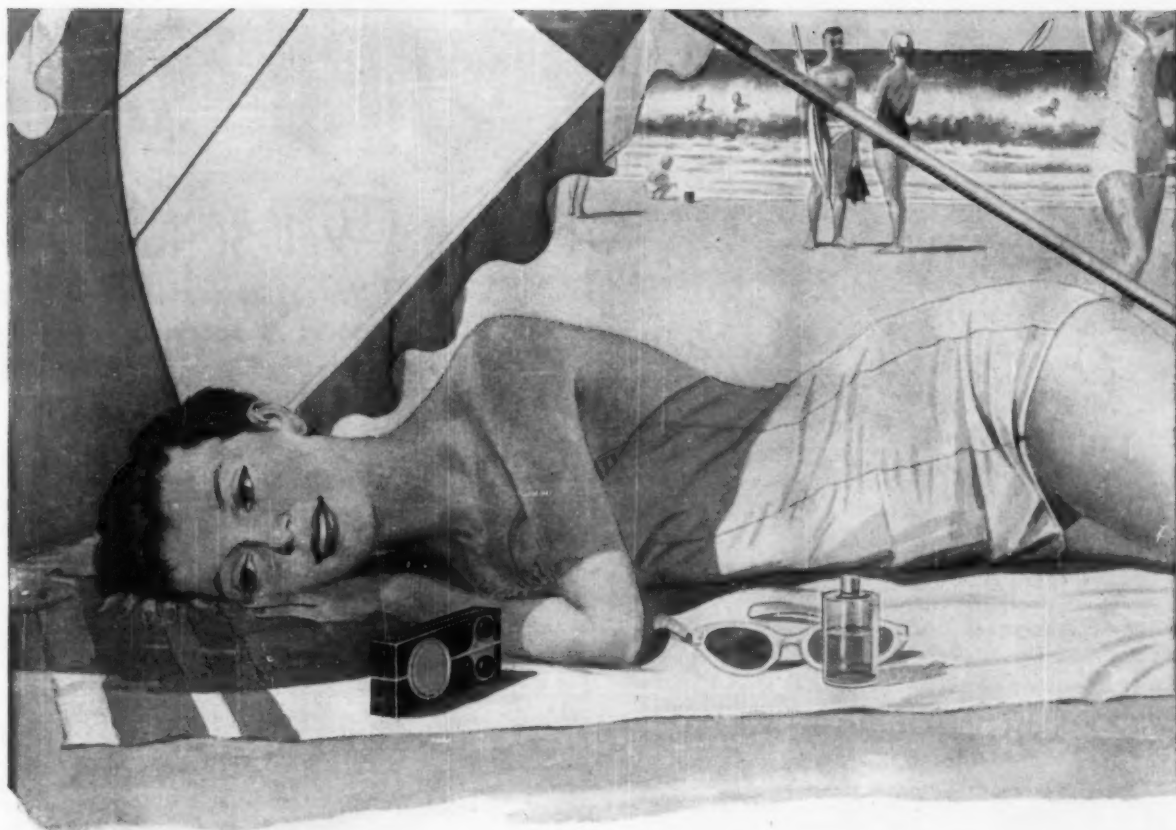
how becomes more vital to success. If the captain is inexperienced, any unexpected puff of wind will capsize the business ship.

Most of the wrecks are in the retail field, which year in and year out accounts for half or more of all failures. Eating and drinking places and food stores together make up at least a third of the retail toll. The 10-year-old Lexington Avenue restaurant that closed its doors last week had plenty of company. In fact it lasted longer than most of the victims. Around 60% of all casualties are less than five years old. However, failures among concerns that are 10 years or more have risen to 20% of the total compared with only 9% in 1947. One explanation of this shift is that those businessmen who gained their experience in wartime and in the immediate postwar sellers' markets haven't learned to cope with today's stiff competition.

• **Easy to Start**—Casualties run heavy in the retail field partly because there are more business units in it than in any other major category, and partly because such a business can generally be started with less capital than, say, a manufacturing concern. The would-be businessman sees in the retail field the easiest route to a business of his own.

There's little evidence of a relationship between size of a business and its chances for failure. D&B doesn't go along with the business analysts who attribute the rising number of small business failures to the "squeeze"—tight money, shrinking profit margins, and competitive forces—that affects little concerns more intensely than bigger ones. "Perhaps this is a matter of reasoning by association," D&B suggests, "that is, more small businesses fail than big businesses; therefore the squeeze." Furthermore, D&B says, "Analysis of individual businesses that have failed reveals no convincing evidence that rising failures are exclusively the result of momentary ups and downs in business activity."

• **The Brighter Side**—From a long-range view, the postwar picture of rising business failures takes on a brighter cast. In the roaring 1920s, business casualties in some years were more than double this year's rate. In 1927, there were 106 failures out of every 10,000 businesses. Total liabilities that year came to around \$520-million, not far from the \$563-million in 1956, the last full year for which liability figures are available. Thus, individual losses were considerably higher in 1956, but most of the rise was due to the shrinking value of the dollar and the increase in the cost of doing business. For the first 10 months of this year, total losses involved in failures were \$517-million, compared with \$472.5-million in the same period a year ago. The increase,



Christmas

...now and next July!

*A gift that will recall Christmas all year 'round...
that can easily be taken anywhere...
is today's pocket-size transistor radio—
powered for long-lasting pleasure by tiny
Mallory Mercury Batteries.*

TINY enough to be tucked into pocket or handbag... stylish enough to go anywhere any time... the miniature radio you give for Christmas is in reality a pleasurable companion that keeps on giving day after day all through the year.

This is particularly true if you have the foresight to make certain your gift is powered by Mallory Mercury Batteries. Unlike ordinary dry cells, these tiny batteries show little loss of power when not in use... give steadier power... last far longer... eliminate the nuisance of frequent battery changes. Mallory Mercury Batteries really bring out the best in portables.

Offering new and broad opportunities in electronic equipment design, these tiny batteries, pioneered by Mallory, have helped make possible the miniaturization of today's nearly-invisible hearing aids, pocket tape recorders, guided missile control equipment. And the future promises even wider use.

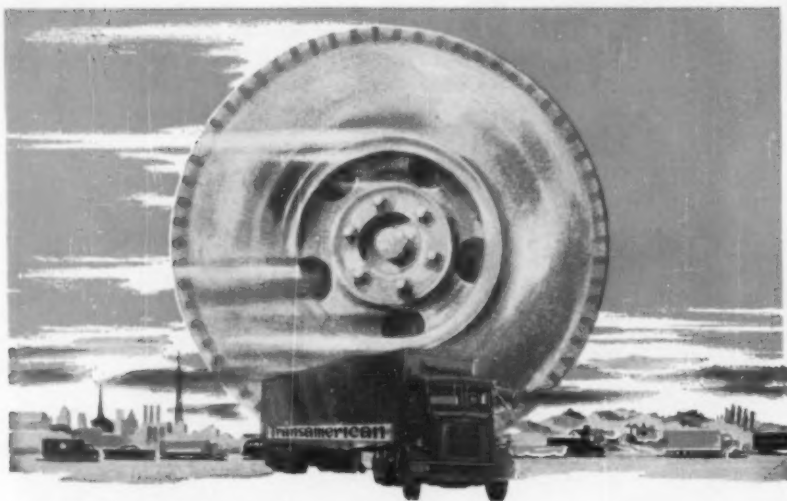
Such pioneering for the future is to be expected from Mallory—the company at home in tomorrow. Mallory serves the Nation's growth industries with precision products and unique engineering experience in the dynamic fields of electronics, electrochemistry and specialized metallurgy.

MALLORY

SERVING INDUSTRY WITH THESE PRODUCTS:

Electromechanical • Resistors, Switches, Tuning Devices, Vibrators
Electrochemical • Capacitors, Mercury and Zinc-Carbon Batteries
Metallurgical • Contacts, Special Metals, Welding Materials

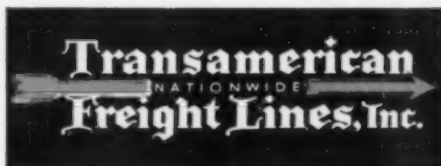
P. R. MALLORY & CO. Inc. INDIANAPOLIS 6, INDIANA



THE BIG WHEEL IN TRANSPORTATION

69 STRATEGICALLY-LOCATED TERMINALS
2,000 COMPANY-OWNED HIGHWAY UNITS
2,600 DIRECT POINTS SERVED DAILY
SYSTEM-WIDE TELETYPE SERVICE
NATIONWIDE SERVICE
TWENTY-SIX YEARS EXPERIENCE

TRANSAMERICAN
VITAL LINK IN AMERICA'S SUPPLY LINE



General Offices: Detroit 9, Michigan • VI 1-9400
ROBERT B. GOTTFREDSON, President



HOW CREATIVE BANKING HELPS YOUR
SOUTHERN PROFITS GROW

**Georgia
location?
Let C&S
make it easy**

In 3 years, 119 companies have located new plants, warehouses or offices in Georgia with the help of The C&S. And at no cost to themselves. In the bank's full-time, fully-staffed Industrial Development Department, they found a gold mine of facts on such subjects as existing buildings, sites, water, labor, and taxes ... plus a wide variety of other help. Write today for details of this and other C&S business-building services for companies doing business in the Southeast.

GEORGIA'S LARGEST BANKING SYSTEM

**The Citizens & Southern
National Bank**

AND AFFILIATES IN GEORGIA



Members FDIC

Atlanta: Broad & Marietta Streets, Atlanta 2, Ga. Chicago: 400 N. Michigan Avenue, Chicago 11, Ill.
New York: 500 Fifth Avenue, New York 36, N.Y.

less than 10%, is smaller than the 15% rise in liabilities chalked up in the first 10 months of 1956 over the same 1955 period. The declining rate looks even more heartening when you note it came despite a growing number of individual casualties.

Wall St. Talks . . .

... about electric utilities
stocks . . . position of municipals . . . December's troubles
... weakness in autos.

Electric utility stocks, bull market laggards (BW-Jul.13'57,p68), are bucking the trend on the downside, too. The traditionally defensive utilities are ready to bounce up, say some analysts. Last week they rose 1% while industrials fell 2.6%.

Municipals are tapering off from the rally that followed the change in the rediscount rate. But the average price of 20-year municipals is still 6% higher than a month ago. California is seeking to take advantage of the strong market with a \$150-million bond issue on Jan. 22, largest such offering up for competitive bidding by any state or municipality in two years. Hitherto, California has generally limited its blocks of such bonds to \$75-million.

December has generally been a month of rising stock prices, especially in the past 10 years. According to Moody's, the average price increase during the month has been 3.4%. This year, however, the market will have a tough time reaching this figure, because of the earlier decline.

The auto group has been a weak spot in the market these past weeks, slumping under pressure of disappointing sales of new models and cutbacks in production. Here are the prices of the Big Three early this week, compared with their lows for the Oct. 21-22 break, and their previous lows for the whole of 1957: Chrysler—\$59.12, \$64, \$61.25; Ford—\$37.25, \$42.25, \$38.12; GM—\$34.25, \$36.62, \$34.87.

In dividends, Canadian investors seem to be faring better this year than their cousins in the U.S. Corporate dividends north of the border are up 8% for 1957, compared with an estimated 1.7% rise in the U.S. (BW-Dec.14'57,p81).

A mixture of rumors and facts gave U.S. Tobacco quite a flurry last week; the shares rose from a low of 20 to over 25, and then sagged back to a

GLARE REDUCING SHEET GLASS

Building owners get **American LUSTRAGRAY**
for efficiency, comfort, appearance, economy



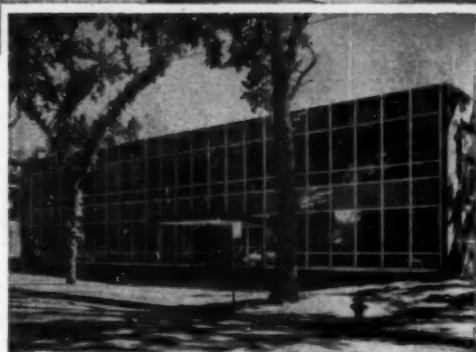
Photo from interior. LUSTRAGRAY glazing reduces sun glare.

Photo from exterior. LUSTRAGRAY glazing enhances appearance of new office building of Aetna Life Insurance Co., Denver, Colo. Architect: Thomas J. Moore. Glazier: Gump Glass Co.

With AMERICAN LUSTRAGRAY, large window areas, which increase occupants' efficiency by creating a feeling of space and freedom from confinement, can be designed without detrimental effects. This neutral gray glass:

- Reduces sun glare 50%, minimizing eyestrain and fatigue
- Reduces heat transmission
- Provides exterior privacy and interior "clear glass" vision
- Makes permanently attractive appearance
- Assures maximum economy

Phone your architect or builder today for confirmation of these AMERICAN LUSTRAGRAY advantages.



MODERN GLASS
Best at a Glance



American
WINDOW *Glass* COMPANY
PITTSBURGH, PA.

PLANTS: ARNOLD, PA. • ELLWOOD CITY, PA.
JEANNETTE, PA. • OKMULGEE, OKLA.

WSW 6955



the door is wide open for
future office-space changes with

MOVABLE *Hauserman* INTERIOR WALLS

Distinctive appearance is only one of the important reasons HAUSERMAN Interior Walls are used in this attractive, executive office. Movability is important, too. It provides far-seeing management with the means of rearranging office plans to maintain efficient utilization of floor space regardless of future requirements.

Also on the practical side is the low cost of preserving the handsome appearance of HAUSERMAN Walls. The baked-enamel colors need only periodic washing to restore their original beauty. Expensive repainting is forever eliminated.

More of the profit-making benefits of HAUSERMAN Walls are explained in the booklet, "How Eight Companies Saved \$595,363". Have your secretary write today for a free copy. Or, better yet, consult the Yellow Pages (under PARTITIONS) and call your nearest HAUSERMAN representative.

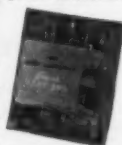
MOVABLE HAUSERMAN INTERIORS

National Lifetime Service... An Exclusive Hauserman Dividend

THE E. F. HAUSERMAN COMPANY
7441 Grant Avenue, Cleveland 5, Ohio
Hauserman of Canada Ltd., Toronto, Ontario
Please send free copy of, "How Eight Companies
Saved \$595,363", to:

Name _____
Company _____ Title _____
Street _____
City _____ Zone _____ State _____

Free Booklet



point about midway between the extremes. The rumors: (1) U.S. Tobacco and Lorillard were going to merge—presidents of both companies denied it; (2) Reader's Digest would report favorably on the efficiency of U.S. Tobacco's King Sano filters—similar publicity had boosted sales of Lorillard's Kents. The fact: U.S. Tobacco Pres. J. W. Peterson reported that sales of King Sano picked up 35% in the first 10 months of this year.

FINANCE BRIEFS

Lower bank profits next year because of lower interest rates are predicted by Edward E. Brown, chairman of the First National Bank of Chicago. He terms the present recession a "mild" one and says he thinks it will end during the first half of next year.

The Canadian dollar continues to drop. It skidded last week to the lowest level in more than a year, to a fraction above \$1.02 in terms of the U.S. dollar. In August, the Canadian dollar was worth \$1.06; late in November, it was still worth \$1.04.

AT&T stockholders continue to grow in number. The latest count: 1.6-million, including 14,500 people named Smith, 6,600 Brown, and 4,950 Jones.

U.S. Savings Bonds, series E and H, may be purchased by institutional investors (except commercial banks) after Jan. 1, the Treasury Department has announced. The limit per investor is \$100,000 each year. Formerly, these issues were available only to individuals, employees' saving plans, and individual trust estates.

Another copper mining cutback has been announced, this time by Kennecott, world's biggest copper producer. Kennecott is reducing monthly output by 3,800 tons, or 12%, starting early in 1958. Phelps Dodge and Anaconda have already taken similar steps.

The Dime Savings Bank of Brooklyn has become the second New York savings bank to claim assets in excess of \$1-billion. Two-thirds of the "Dime's" assets are invested in 74,000 real estate mortgages, practically all of them within the city or nearby suburbs.

Mortgage delinquencies were at the lowest third-quarter level since 1954, according to the U.S. Savings & Loan League. At Sept. 30, 2.05% of mortgage loans were delinquent, vs. 2.23% in September, 1956.



AUTOMOBILES

Another Industry where General American works!

Thousands of tons of steel and rubber . . . plate glass, plastics, machine tools, finishing materials by the trainload . . . component parts in the millions of units. These make the automotive industry America's biggest customer.

Working with this industry, General American supplies dash panels,

air-conditioner housings and roof sections molded of plastics—P-K® fasteners for speedier assembly—corrosion-resistant Kanigen® nickel-alloy coatings for components—Fuller rotary compressors and conveyors for production. General American designs, builds and operates GATX tank cars to move gaso-

line, oil, paint and anti-freeze . . . fabricates special tanks and leases terminal facilities for liquids.

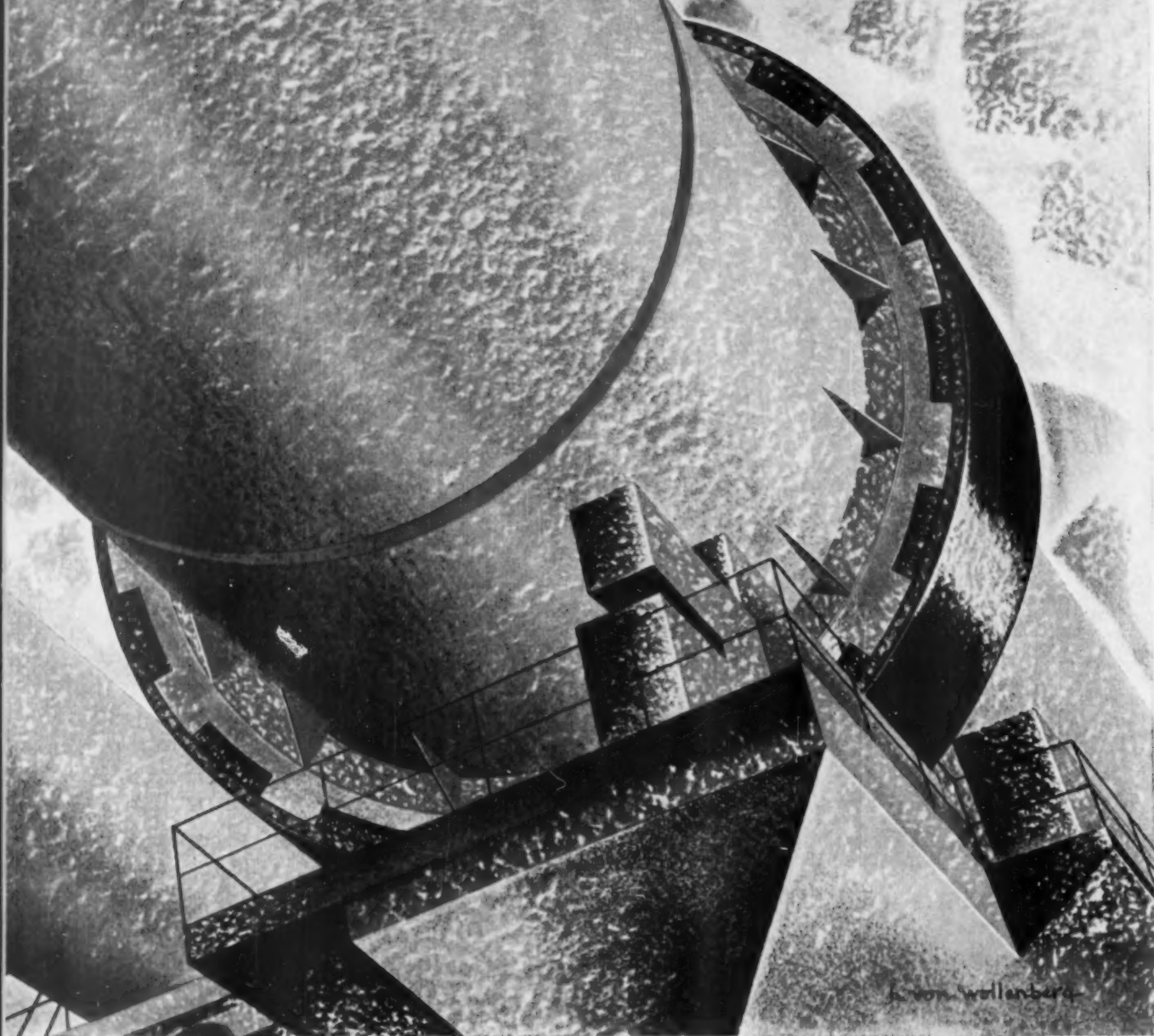
This experience in research, manufacturing, shipping and storage can be applied to your problems. You'll find . . . it pays to plan with General American.

GENERAL AMERICAN TRANSPORTATION CORPORATION

135 South La Salle Street • Chicago 90, Illinois
Offices in all principal cities



patterns of tomorrow
...in processing raw materials



K. von Wollenberg



Today, Allis-Chalmers processing equipment prepares a large share of all the raw materials used by industry. Looking ahead, Allis-Chalmers engineers and research scientists are even now developing machinery for better and cleaner processes. With these will come the increased efficiencies and production economies vital to the nation's future industrial requirements. It's one more way in which...

better tomorrows begin today at

ALLIS-CHALMERS
MILWAUKEE 1, WISCONSIN



In Marketing

...

Flickering "Fair Trade" Battle Flares

As Suit Maker Sues Korvette

The "fair trade" battle, though waning on many fronts, is by no means dead. This week hearings will be held in the case of H. Daroff & Sons, Inc., Philadelphia manufacturer of men's suits (BW-Sep.22'56,p49), and E. J. Korvette, Inc., New York-based discount department store.

Daroff won a preliminary injunction against Korvette, barring the chain's Media (Pa.) store from advertising or selling "Botany 500" suits at less than Daroff's fair-trade price. It brought similar action against Korvette's New York outlets. Korvette had been selling the suits—pegged at \$65 retail—for \$42.90.

At the same time, Daroff charged Korvette with misrepresentation, alleging that the store was offering under the "Botany 500" label suits that were not "Botany 500" suits.

Korvette denies the misrepresentation charge. On the pricing question, it says only that it is following its fixed policy of selling goods at its own price, to bring the consumer the best deal it can.

...

Sunday Merchants Are Blue

Over Enforcement of Blue Laws

The ruckus over Sunday shopping (BW-Jun.8'57,p62) has erupted again, this time in Pennsylvania.

Hess Bros., Allentown department store, stirred things up a few weeks ago when it announced it was going to open its store on the three Sundays before Christmas. Avowed target was Two Guys From Harrison, big discount operation that has a branch in nearby Whitehall, Pa. Two Guys has for some time stayed open on Sundays, in defiance of a 164-year-old state blue law.

Hess hoped its action would focus the spotlight on Two Guys' violation, would arouse public opinion against all Sunday openings. Other Allentown merchants, including a second department store, Zollinger-Harned, went along with Hess. But before the first test on Sunday, Dec. 8, the county district attorney said he would enforce the state ban. This threat—exactly what the in-town stores were after—was enough to cause Hess and the others to stay closed.

Two Guys, however, opened as usual. The district attorney's 25-man squad moved through the crowds of Christmas shoppers, taking down names and addresses of store personnel. The next day, complaints were filed against 120 violators, who, if they are found guilty, will have to pay fines of \$4 plus costs—a maximum of \$15.

Last Sunday, Two Guys opened again. Once again the district attorney's men took down names for arrest. This time the charge is conspiracy to violate the law. And this time there were only 40 complaints—because union pickets kept some employees out of the store

MORE NEWS ABOUT MARKETING ON:

- P. 46 Housing Promotion Aims at the Consumer
- P. 52 Detroit Asks: What's Up?

(page 106). At this point, the state attorney general is likely to step in, and he may force Two Guys to close.

Other Pennsylvania counties—Bucks, Dauphin, and Susquehanna—have taken up their battle axes.

Meanwhile, roadside merchants are warming for a fight in New Jersey. Paramus citizens voted last month for a stringent blue law. The state lower courts gave the Sunday merchants a clobbering. Now these merchants seek a hearing before the State Supreme Court. Their argument: You can't have a blue law on a local level in today's automotive age; customers can just drive down the pike a bit to get out of the blue law area into an open area.

Paramus roadside merchants figure that the Sunday ban is costing them 40% of their weekly volume.

...

New System of Instantaneous

TV Ratings to Bow Next Month

TV sponsors—who more and more use program ratings either to congratulate the cast or ax the show—will be able to do one or the other much faster if a new system of instantaneous ratings works according to claims.

The American Research Bureau, national TV rating service, this week was scheduled to demonstrate its Arbitron system, in which TV sets in a sampling of homes will be connected by telephone lines to a central computing office. A device in the sets will flash information such as the channel to which the set is tuned and any viewing switches that occur. At 90-sec. intervals this information will be computed to yield program ratings. Clients will get printed reports; they can also see results on a big display board in the ARB office or even, if they want, in their own offices.

Instant ratings will solve several problems for rating-conscious advertisers, agencies, and networks. Subscribers often have to wait from two weeks to a month for their national ratings. Trendex reports, based on telephone calls, are available overnight, but they measure only cities where the three nets are in competition, so their ratings do not represent a national sample. Further, Arbitron will measure all set tuning during the month, avoiding the problems of measuring only one week out of the month for the national rating.

Further, James W. Seiler, president of ARB, feels that use of electronic equipment and flashing lights will give the reports an aura of greater accuracy, though he insists his present diary system is just as accurate.

Seiler says ARB plans to go into commercial operation in New York early in January, with a 300-home sample. Later in January, he will add Chicago and Los Angeles. Other cities will follow, but Seiler concedes that the system is economically practical, for individual city ratings, on only about the top 15 markets. He plans to have a national sample in operation in about a year.

Selling a House Coast to Coast



SELLING POINT NO. 1 of prefab builder Donald J. Scholz's Mark '58 home is kitchen, which includes an electronic oven and kitchen grill, along with conventional items.



SELLING POINT NO. 2: a closed-circuit TV system that connects the playroom, front yard, and patio with the kitchen. Another of Scholz's "glamor" items is built-in hi-fi.

Scholz Homes, builder of prefabs, is teaming up with equipment manufacturers for the building industry's biggest promotional push behind a single house and its new products.

Beginning next May people all over the country will be reading about the new house shown here, seeing it on TV, or flocking to any one of several hundred housing subdivisions to inspect its eye-catching features, such as closed-circuit TV, built-in hi-fi equipment with stereophonic sound, kitchen grill and electronic oven. Called the Mark '58, the house plays the starring role in a \$1-million national advertising and promotion extravaganza that Donald J. Scholz (cover), president of Scholz Homes, Inc., Toledo, the country's second largest prefab house manufacturer, has put together with the aid of building supplies and equipment makers.

• **Purpose**—The campaign's primary objective, of course, is to sell Scholz prefabs, bring more builders into the prefab ranks, and introduce various products and equipment. At the same time, in drawing together manufacturers and builders to sell to the general public on a national level, the campaign injects a strong merchandising element into the housing industry at a period when many industry observers believe aggressive selling efforts are sorely needed.

Such a drive makes good sense for Scholz. Don Scholz, now only 38 years old, started building prefabs on a small scale in 1946, this year expects to gross around \$10-million in sales. He has always specialized in higher priced houses—the Mark '58, for example, comes in four models ranging in cost from \$22,000 to \$45,000—and these justify the costly promotion efforts. Scholz hopes that in building a campaign around an admitted "glamor house," he can demonstrate the kind of quality house that can be prefabricated. And dealing in prefabs gives him a standardized product that can be advertised nationally.

• **Campaign Plan**—Here is how the campaign shapes up:

• So far about 100 major builders around the country have agreed to erect and furnish the Mark '58 in their developments. On May 20, with a blare of publicity, houses across the country will open to the public. In the meantime, Scholz is pushing hard to introduce the house to the building trade, line up other builders.

• Some 28 national manufacturers



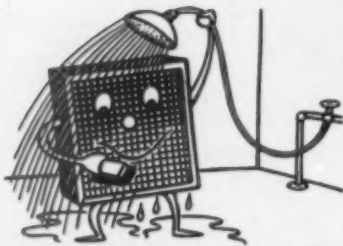
SELLING POINT NO. 3: a 16-in. deep pool on the patio, installed purely for ornamental purposes and not utility.

SELLING POINT NO. 4: a Thermopane wall. It underlines the fact that quality and prefab can go together.



AIR-MAZING FACTS

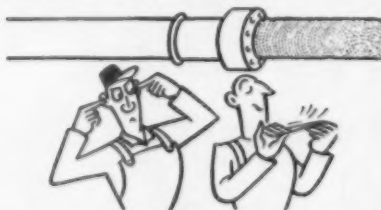
BY O.SOGLOW



NEW FILTER CLEANS ITSELF! You don't have to clean an Automaze air filter. It cleans itself—*automatically!* Automaze's continuous belt of filter panels rotates through a cleaning tank where "pulse-type" action agitates each panel, removes the accumulated dirt. Goes 3 to 6 months without attention.



PAID-UP PROTECTION! Plants producing precision electronic and mechanical parts can be made dirt-free at a very low cost by using efficient Air-Maze filters or electronic air cleaners. In most cases, initial costs are more than paid back by savings in increased production, lower maintenance and fewer rejects.



STOP THAT RACKET! Air-Maze in-line silencers boost employee efficiency by greatly reducing air intake noise from diesel engines. Also available in combination with oil bath and oil-wetted air filters.

FOR ANY DEVICE THAT USES AIR OR LIQUIDS. For engines, compressors, air conditioners, ventilators . . . or any device using air or liquids—there is an Air-Maze filter engineered to match each need. Filter-trained representatives in all principal cities will be glad to help you solve your dirt-removal problems. Write Air-Maze Corporation, Cleveland 28, Ohio.

AIR-MAZE The Filter Engineers

AIR FILTERS • SPARK ARRESTORS • LIQUID FILTERS
SILENCERS • OIL SEPARATORS • GREASE FILTERS

" . . . in direct appeal to consumers, manufacturers are asking public to inspect their wares in the Mark '58 showcase . . . "

STORY starts on p. 46

of supplies and equipment—names like Aluminum Co. of America, Crane Co., Johns-Manville, Libbey-Owens-Ford, Radio Corp. of America and RCA-Whirlpool, and Westinghouse Electric Corp.—are participating in the promotion. They have contributed \$500,000 to pay for magazine, radio, TV, and other forms of publicity. In addition, some of them will plug the house over their own national TV shows.

• **Direct Aim**—Tie-in campaigns between builders and manufacturers, of course, are not new. Large manufacturers, which have the necessary budgets, often develop promotions with builders to advertise houses and products. But the manufacturers in most cases aim at selling their products to the building trade, leaving the individual builders to sell houses. The Scholz promotion, however, is being aimed directly at the consumer. The participating manufacturers are asking the public to inspect their wares in the Mark '58 showcase.

• **Merchandising Need**—The need for more merchandising in the housing field is something many industry spokesmen are talking about. Last September, for example, the National Assn. of Home Builders got together to discuss the lagging housing market and what could be done to enliven it. A recurring theme was the need for more effective selling and promotion methods, especially national advertising campaigns to interest the public in owning homes, with national manufacturers helping the builder do a better selling job.

Two weeks ago, Walter E. Hoadley, treasurer of the Armstrong Cork Co., described "the absence of aggressive merchandising and selling in both the new home and improvement markets" as one of the roadblocks in the way of housing growth.

As a response to the need to sell homes, the Scholz campaign has a certain significance for the housing industry as a whole. In any event, it seems likely to be next year's most expensively mounted sales pitch.

• **Kick-Off**—The first blast of publicity will alert the public on May 20, in the form of a three-minute color movie leading into the George Gobel-Eddie Fisher TV program. The same day, the June issue of House Beautiful magazine will appear, featuring the Mark '58. Coverage will include a 32-page color advertising insert. Around the country, a fanfare of radio and newspaper promotions will herald the opening of the models.

Then a barrage of other TV plugs from participating companies will follow.

• **How It Began**—Scholz conceived the idea for this national consumer promotion when a tie-in promotion he had arranged about a year ago with a big soap maker proved disappointing to him. A Scholz house was one of the prizes in a soap contest, but builder Scholz felt he was short-changed on the publicity. Nevertheless, he was impressed by the fact that within a period of only three weeks he was able to line up 75 builders to cooperate in the promotion. This experience convinced him that "builders were interested in a program that would actually tie in a national-level advertising campaign to their own house and subdivisions. The trick was to get the proper resources to launch such a program."

Then early this year both Alcoa and RCA expressed interest in joining Scholz in some sort of promotion. "We decided then and there," Scholz says, "that if this thing could be made into an industry thing, the marketing and promotional possibilities would be tremendous."

Scholz hired a marketing man, Harold W. Danser, Jr., to help him carry out the program. They went directly to the presidents of major manufacturers. "We found with presidents practically an open-arm acceptance of the plan," Scholz says.

At the same time, he began working on the design of the house itself. Scholz wanted two concepts. The house should be conceived so that the latest developments in housing materials and appliances could be introduced to the market at the same time. And he wanted it to be unusual and eye-catching. House Beautiful magazine, which has designated the Mark '58 its "House of the Year," worked with Scholz designers, and the participating manufacturers added their suggestions.

Scholz then put up the first—and so far, the only—Mark '58 model in Imperial Woods, a plush residential subdivision in Toledo.

• **Lining Up Builders**—But before Scholz could ask the public to visit his house, he had to persuade builders around the country to erect models. He assembled his sales staff of 100, explained the program in detail, armed them with literature, and turned them loose on builders. At the same time, he arranged to fly builders into Toledo to see the model. It all worked. "I don't think I'm exaggerating when I say that

Here's what U. S. Steel Supply's

ANY STEEL
ANYWHERE
ANY TIME
SERVICE

means to Dray Manufacturing Co.

"Dependable Service from U. S. Steel Supply has
INCREASED PRODUCTION
50% "

says
James H. Dray,
President,
Dray Manufacturing
Company, Inc.



"The net result of a 4-year association with U. S. Steel Supply has meant a *proven* 50% increase in our total production," says Mr. James H. Dray, President of the Dray Manufacturing Company, Inc., Downey, California, manufacturer of metal office furniture.

By using U. S. Steel Supply's ANY STEEL, ANYWHERE, ANY TIME SERVICE, Mr. Dray eliminated the need for a voluminous inventory. "We previously carried a \$60,000 in-plant stock of cold-rolled steel sheets," he says. "Today, we have less than \$16,000 worth on hand, because we have our steel delivered, if necessary, on a day-to-day basis from U. S. Steel Supply—and the increase in available working capital, which had been tied-up in inventory, permitted us to buy additional production equipment *we could not afford before*."

"Secondly," says Mr. Dray, "our reduced inventory also made an extra 10,000 square feet of space available for increased production facilities and machinery." Steel buyers, like James H. Dray, have found that by using ANY STEEL, ANYWHERE, ANY TIME SERVICE it is actually *less expensive* to buy from U. S. Steel Supply.

Why not put this service to work for you?

Your steel needs, regardless of your location, can be handled immediately and accurately by U. S. Steel Supply's ANY STEEL, ANYWHERE, ANY TIME SERVICE. You'll get money-saving, time-saving and problem-solving benefits when you deal with U. S. Steel Supply, *plus* the invaluable experience of our metallurgists, our engineers

and our sales representatives.

If you want one of our representatives to help you plan for new efficiency, new economy and new profitability in your future steel buying needs, just write to U. S. Steel Supply at the address listed below.

U. S. STEEL SUPPLY

DIVISION

Mailing Address:

P. O. Box 1099, Dept. A12, Chicago 90, Ill.



General Offices:

208 So. La Salle Street, Chicago 4, Ill.

Warehouses and Sales Offices Coast to Coast

UNITED STATES STEEL

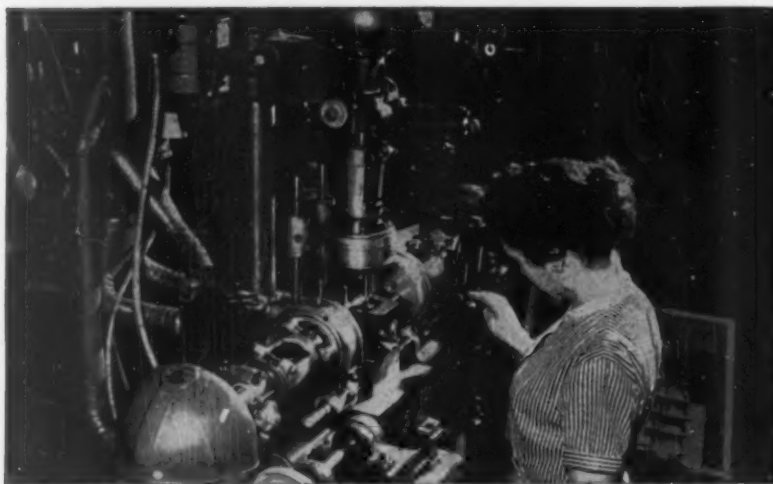


F A C T O R I E S

look to...CLARAGE for
air handling and conditioning equipment

Clarage serves industrial plants of all types, all sizes the world over. By specializing — building air handling and conditioning equipment exclusively — Clarage has a concentrated "know-how" that means important dividends for you. Whatever your requirements in our field, call upon Clarage . . . dependable equipment for making air your servant.

CLARAGE FAN COMPANY, Kalamazoo, Mich.



STANDARD TOOLING in special purpose set-up

This multiple unit set-up of nine standard 14" Delta Super-Hi Speed Drill Presses solved a complex production problem and saved an investment in special machine tools for Whitehouse Products, Inc., Brooklyn, N. Y. Completely automatic, the four drill press arrangement shown above drills 16 holes and does deburring on 300 camera parts an hour. Whitehouse

Products, Inc. is a typical example of how thousands of companies are using accurate, low cost Delta Power Tools to supplement or replace costly conventional tooling. For fully illustrated booklet of examples in other industries write:

ROCKWELL MANUFACTURING COMPANY
DELTA POWER TOOL DIVISION
540P N. Lexington Ave., Pittsburgh 8, Pa.

almost any builder who sees this house agrees to build it," Scholz says.

Builders who agree to participate get a detailed program for each model. Suppose, for example, the builder decides to put up the lowest priced model. The prefab package costs him about \$8,040 f.o.b. Toledo. To this he must add a basic display package, which includes such items as range and oven, dishwasher, garbage disposal, refrigerator-freezer, glass insulation, chimney, fireplace, acoustical tile—all costing about \$2,097. A second decor package goes into the house, including paint, wallpaper, draperies, furniture, TV, radio, hi-fi, carpet, at a cost of \$3,594. Site costs, like grading, building permit, labor, bring the total to around \$20,000, to which the builder adds his 10% or so profit, for a total cost of around \$22,000.

• **Frosting the House**—Scholz urges the builder to add final frosting in the form of the really posh items like closed-circuit TV installation, sound equipment, kitchen grill and electronic oven. This is in line with the idea that the house should be "a traffic builder, not necessarily just a hot seller." Most builders will have other models on display. "The Mark '58 will get them into a development," Scholz adds, "but we also want to have several bargains around for the buyers to get serious about."

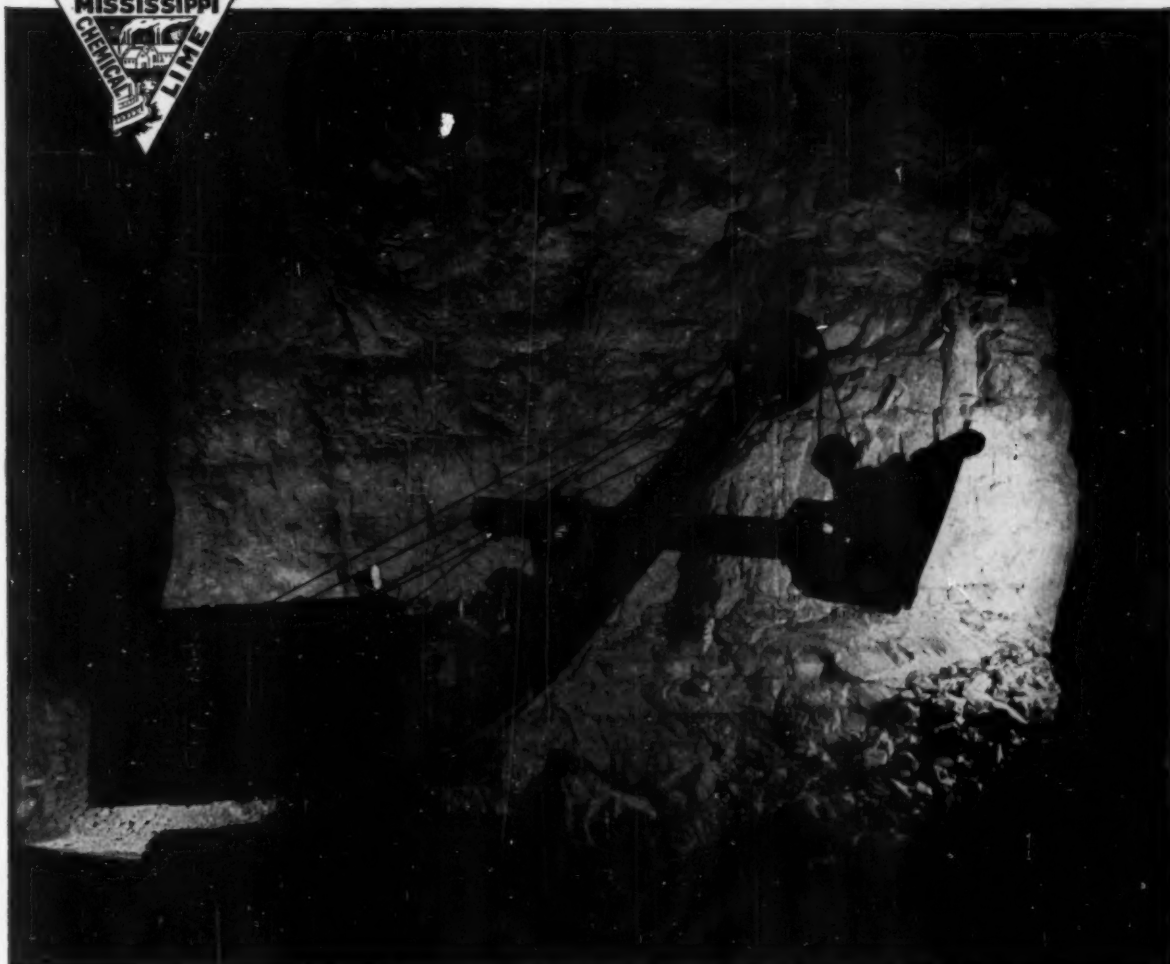
Scholz has assembled a complete furniture package, designed for each of his prefab models, which the builder can rent. They can also utilize a Scholz financing arrangement. And they can get a lot of help in erecting the model, and handling promotional details.

Scholz's sales pitch to builders is really just getting up steam. The December issue of the building magazine, *House & Home*, carries a story about the Mark '58 promotion. In January, Scholz will put on a real push at the Chicago meeting of the National Assn. of Home Builders. A local builder will put up a model on Chicago's North Shore, 32 miles away, and Scholz plans to take builders and their wives out to see the house.

Scholz then will begin showing a color movie about the model to other builders throughout the country and continue flying builders to Toledo. Finally, the January issue of *House & Home* will carry the 32-page advertising insert.

• **High Hopes**—Scholz believes that this program will add to the 100 builders who already have agreed to build the Mark '58. "We figure it is already a success with 100 big builders. If we get 200 lined up by spring, as we fully expect, it will become a very successful project. And if we wind up with 500 builders, as some of our more optimistic officials expect, it will be simply fantastic." **END**

MISSISSIPPI LIME cements employee relations
by adding extra protection to its benefits program...



Big shovel chews out huge bites of pure limestone deep underground in Mississippi Lime Company mine.

...with **GROUP INSURANCE**
from **NEW YORK LIFE**

By consistently maintaining high standards of purity and quality, The Mississippi Lime Company of Alton, Illinois, has earned the reputation of being a leading producer of limestone products for farm, home and industry.

This leadership also applies to Mississippi Lime's employee benefits program which includes a modern Group Life, Hospital and Surgical Insurance plan specifically designed for the company by New York Life.

This insurance coverage helps provide protection for every salaried employee against financial distress which his family could face, should he lose his life or should he or a member of his family require hospital or surgical care.

Like thousands of other leading firms in the United States and Canada, Mississippi Lime finds that better em-

ployee relations and higher morale result from providing this vital protection.

If you would like to know more on how a flexible, easily administered New York Life Group Insurance plan can be made a part of your employee benefits program, ask your agent, your broker or write direct.

NEW YORK LIFE

INSURANCE  COMPANY

51 Madison Avenue, New York 10, N. Y.
(In Canada: 320 Bay Street, Toronto, Ontario)

WHEN YOU THINK OF GROUP INSURANCE, THINK OF NEW YORK LIFE

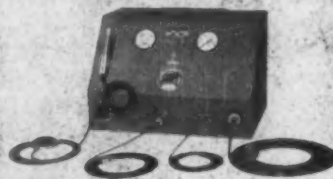


for Super-Fine Cutting
of Hard, Brittle Material...
the *S.S. White*
Industrial Airbrasive® Unit

Why be in the dark about our Industrial Airbrasive Unit? It can shed a more profitable light on industrial cutting and abrading methods! The unit gas-propels a fine stream of abrasives that do a *fast, cool and shockless* job of cutting germanium, shaping fragile crystals, removing surface deposits... etching, drilling, and deburring virtually any hard, brittle material. Developed from the AIRDENT® equipment made by S. S. WHITE for the dental profession, the Industrial Airbrasive Unit does jobs that were once thought impossible. Send us a sample, and let us show you what the Industrial Airbrasive Unit can do on your own product. Or, for further information, just write to:

S.S. White

First Name in Airbrasive Cutting



S. S. White Industrial Division,
Dept. 15A

10 East 40th Street,
New York 18, N. Y.

Western Office:
1839 West Pico Blvd.,
Los Angeles 6, Calif.

THE MARKETING PATTERN

Detroit Doubts Its Dogmas

NEXT MONTH, the National Automobile Dealers Assn., representing some 30,000 franchised new car merchants, will go into their annual huddle to talk about their problems. They'll be meeting at a time when, for the third year in a row, new car sales are below early expectations. More than ever, businessmen are focusing their attention on the auto industry—and asking: What's the matter with Detroit? (BW—Nov. 9 '57, p81).

For their part, the NADA sessions at Miami Beach are most likely to be dominated by one theme: territorial security. Many dealers would like to establish some form of protection—it once was part of their franchise agreements—against cross-selling—sale by one dealer in what is deemed the sales territory of another.

Neither Detroit nor, more importantly, the Justice Dept. is prepared to go along with some new form of territorial security. In fact, Washington's antitrust charges against Volkswagen are based partly on alleged restrictions of franchise areas (BW—Dec. 14 '57, p130).

THERE is a chance NADA will seek Congressional legislation for relief, paralleling its 1956 success in winning factory-dealer legislation.

But some Detroit auto men are, in effect, telling dealers they ought to forget about territorial security and concentrate instead on aggressive and smart merchandising. One spokesman for this view is Ivan L. Wiles, executive vice-president for dealer relations of GM (BW—Jul. 7 '56, p55).

Wiles thinks that dealers, like other retailers, have to accept the fact that today's customer is a mobile one, and that it isn't so much cross-selling as cross-buying that hurts. He cites what has happened through supermarkets and shopping centers and says:

"Traditional methods of retailing have always attempted to fight the new trends by rearguard actions. . . . They have been conspicuously unsuccessful . . . in the final analysis any business must go in the direction the customer leads it, and not necessarily where it would like to go."

Today's customer, Wiles says, is

a lot different from his counterpart 20 years ago. He is interested in five things: price, public acceptance, availability, accessibility, and display. The dealer can do most about the latter three.

Here are some suggestions that Wiles believes would attack the heart of many dealer woes:

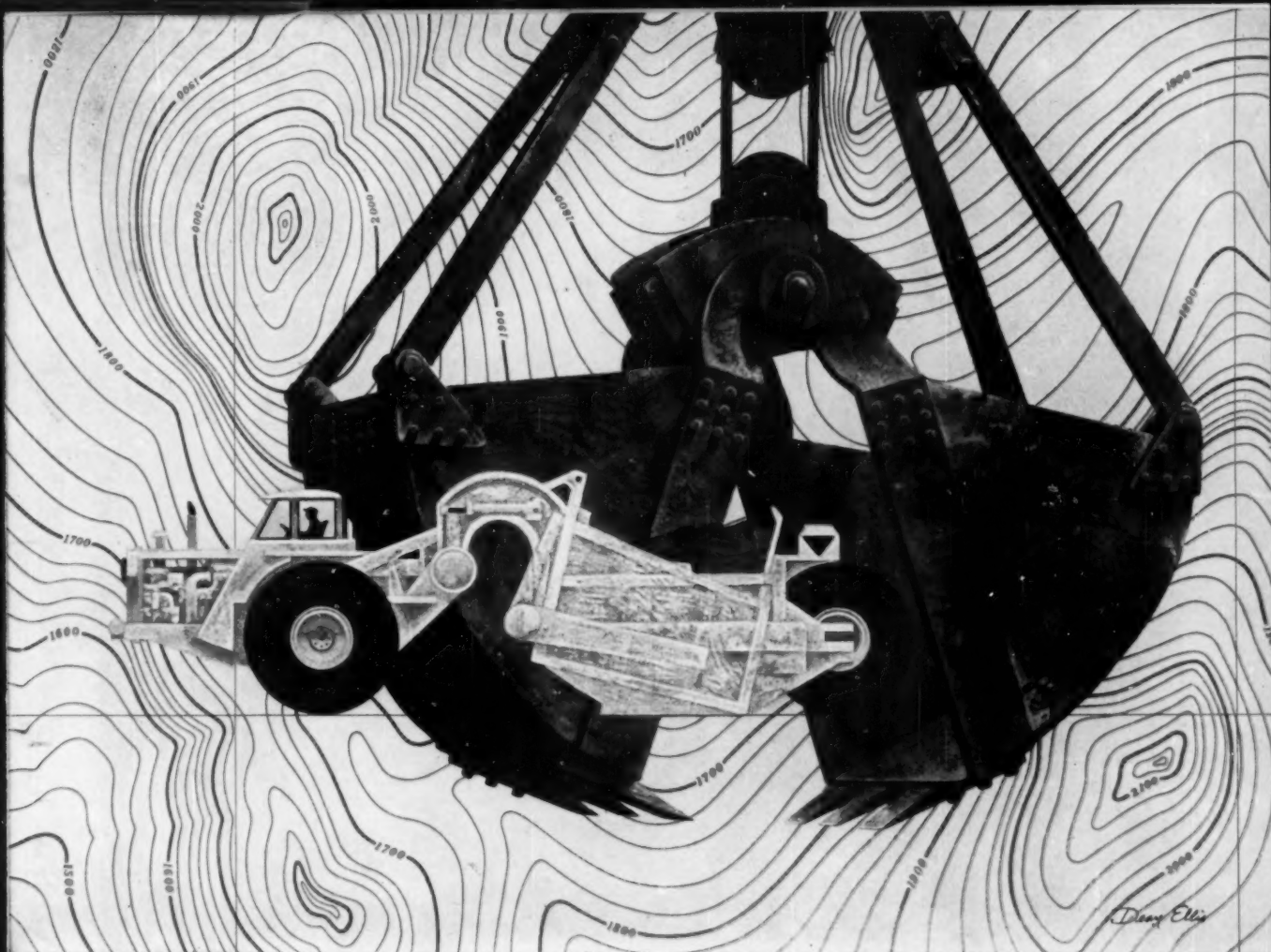
- Display new cars outdoors—"automobiles were built to live outdoors."
- Establish suburban stores with ample parking space.
- Make dealerships attractive to women, even hire women for sales jobs. "Why should dealerships be run like a man's club?"

Individually, these suggestions may seem superficial, but there is nothing superficial about the points they make that auto dealers need to change as their customers change, and that longing for the good old days is no solution for anything.

WHAT'S MORE, there's a suspicion in the back of many a Detroit's mind that even more dramatic changes are just ahead. For example, till very recently Detroit prided itself mightily on its sleek method of distribution and its magic formula of "planned obsolescence." Even these are being questioned now.

Auto makers are asking themselves whether the obsolescence formula hasn't placed so much financial strain on dealers and manufacturers alike that the cars have been priced out of reach of the customers. If this doubt is justified, they wonder whether the manufacturers shouldn't build fewer models so that each dealer could carry a more representative inventory—an inventory that would be impossibly costly to carry with today's large number of models.

There's an even more significant doubt being mentioned in the backrooms of Detroit. Some auto men are actually wondering whether it isn't time to modify the theory of a new model every year—always considered the auto industry's great contribution to selling—because of the heavy drain on capital. This doubt gets special poignancy in the light of the success of such unchanging imported cars as Volkswagen.



New machines lower cost of moving mountains

Giant earth movers help stretch road-building and construction dollars

Labor and material are vastly more expensive now than thirty years ago. Nevertheless, the cost per cubic yard of moving mountains and filling valleys is still about as low as it was then! This is because advances in earth-mover design and manufacture and improvements in lubricants and tires have teamed to produce equipment with immense power, speed, stamina, and capacity.

Scrapers, with more than 400 horsepower, move over 24 cubic yards at a bite . . . towering cranes lift 150 tons high in the air, then place them gently, precisely where needed . . . versatile tractors, with an assortment of specialized attachments, lay pipe, bulldoze, move, load, lift, backhoe, and shovel. These rugged giants not only keep costs down, but ac-

tually make today's gigantic highway and construction projects possible.

The vast federal highway program alone will call for over \$7 billion in machines and replacement parts. As the industry expands, manufacturers of earth-moving equipment often need financial advice and assistance. They find both at First National City. Here, bankers help plan and provide financing to build new plants and expedite distribution. They also offer experienced counsel and credit to manufacturers setting up dealer-credit systems.

The Bank's 72 Branches, Offices, and Affiliates overseas facilitate the export of equipment from the United States as well as its manufacture and distribution abroad. They make short-term loans in local currencies, help find and establish new dealers, and supply valuable credit and market information.

If you appreciate up-to-date financial counsel and a creative approach to credit, bring your business problems to First National City. You'll learn the many advantages of having a *banker* instead of just a bank account.

**The FIRST
NATIONAL CITY BANK**
of New York
First in World Wide Banking

Member Federal Reserve System



CARRY FIRST NATIONAL CITY BANK TRAVELERS CHECKS...SAFE...SPEND THEM ANYWHERE

THE CHASE FOR ELECTRIC BOAT



Vital arteries for our atomic underseas fleet

NAUTILUS and SEAWOLF are now at sea. SKATE is being readied for commissioning. TRITON, SKIPJACK and more to come make up our fleet of atomic-powered submarines. Their builder, General Dynamics Corporation's Electric Boat Division, makes extensive use of Chase copper and copper alloy tubes aboard these ships. You'll find *tons* of Chase copper and copper alloys in each submarine—chosen for the same quality that can help you to better products at lower cost. For tube, wire, sheet and strip made from Kennecott copper, call Chase today—locally, or at Waterbury 20, Connecticut.



CHASE BRASS & COPPER CO.
SUBSIDIARY OF
KENNECOTT COPPER CORP.



CHASE COPPER AND COPPER ALLOY TUBES—miles per ship—are used in vital heat exchanger systems, and in water, fuel, oil, heating and cooling, waste and vent lines aboard our new "fleet" of atomic-powered submarines. Other Chase brass mill products perform a variety of important functions in each craft as well.

In Management

• • •

American Hardware Corp. and B.S.F. Co. Proposition Savage Arms' Stockholders

American Hardware Corp. and B.S.F. Co., the investment holding company which owns a quarter of American's stock, went straight to the stockholders in their latest move to try to gain control of Savage Arms Corp. Savage makes firearms, lawnmowers, and refrigerator cabinets. Twice its management has turned down bids from American Hardware and B.S.F., which together own 100,000 shares (13%) of Savage's stock.

The stockholders were offered one-half share of American common plus \$7.50 for every share of Savage deposited by Dec. 23. American agrees to take at least 100,000 shares, and can elect to take up to 250,000.

Savage management, while saying it believes the company "will continue to grow and prosper," gave stockholders no direct advice on acceptance or rejection of the offer. Its only suggestion to stockholders was that they consult a broker.

Last month, American Hardware opposed Savage's plan to acquire Aircraft Armaments, Inc., Baltimore engineering outfit, by an exchange of stock, and garnered enough proxies to defeat the deal.

• • •

Compensation of High Executives Showed a Rise of 5.1% in 1956

Top management compensation went up an average of 5.1% last year, according to a new survey by the American Management Assn. This was the second biggest jump in the five years for which the AMA has comparable figures. It was topped only by the 5.9% average increase in 1955.

Half of the 35,000 high executives covered in the survey received raises last year; 10% of them took home lower salaries.

Bonus incentives or profit-sharing plans accounted for 15% of the total executive compensation, going to about 58% of the executives. Retirement fund contributions averaging about 10% of their salaries were made for three-quarters of the men.

• • •

Idea of Plant Chaplain Gets Short Shift, Even From Church

At a Methodist conference in Washington last week, a churchman, an industrialist, and a union leader all criticized the practice of employing plant chaplains. Methodist Bishop G. Bromley Oxnam told the group

MORE NEWS ABOUT MANAGEMENT ON:

- P. 57... The Board of Directors: What Does It Do; What Should It Do?

that it was not the corporation's duty to provide religious counsel. An ordained minister who was on a corporation's payroll, he said, might well lose some of his freedom.

The union representative, Victor Reuther, assistant to the president of the United Auto Workers, said that the hiring of plant chaplains was increasing, and he complained that "many of these chaplains, perhaps unwittingly, are used to promote company interests."

Leon E. Hickman, Aluminum Co. of America vice-president, widened the criticism of the practice to include union-paid churchmen. Only ministers "paid by the church" can freely speak for the church, he said. He joined Oxnam in objecting to the use of ministers as arbitrators in labor-management disputes.

• • •

Management Briefs

Businessmen have to get fewer, not more, facts to make intelligent decisions, Walter W. Finke, president of the Datamatic Div. of Minneapolis-Honeywell Regulator Co., told a Chicago conference of the American Management Assn. Most businessmen, he warned, are so fervent about receiving complete data and statistics that they get bogged down in "a labyrinth of irrelevant detail."

An unlikely quartet has formed a new company to manufacture aluminum-domed theaters. Ex-NBC Pres. Sylvester L. (Pat) Weaver, Jr., heads the company, which also includes aluminum-steel-auto magnate Henry J. Kaiser, theatrical producer Mike Todd, and architect Frank Lloyd Wright. The as-yet-unnamed corporation (Dome Corp. was considered and discarded) is now building a prototype of its theater in a "secret" location.

Herbert Braasch's plan for reorganization of New Haven Clock & Watch Co. has been accepted by the company's creditors and the U.S. District Court. Dr. Max A. Geller, once New Haven chairman, will again be chief executive officer. New York attorney Braasch, who last spring made an unsuccessful attempt to stall Alaska Juneau Gold Mining Co.'s diversification program (BW-Mar.16'57,p80), becomes secretary.

Hamilton Watch Co. may "go foreign" and buy into its Japanese supplier (BW-Oct.19'57,p52). Hamilton is mulling over an offer of a share in Takano Seimitsu Kogyo Co., Ltd., a Nagoya watch company. Takano is now closely held—only "about 10" stockholders.

Underwood Corp. joined the parade of typewriter makers who are laying off workers until sales catch up with production. Underwood's 60-day lay-off of 3,300 workers echoes similar action at Smith-Corona, Inc., and the Remington Rand division of Sperry Rand Corp.

Presenting...Portrait of Craftsmanship in Action



The all new Packard Hawk for 1958



THE MOST ORIGINAL CAR ON THE AMERICAN ROAD

You will find no other car like the Packard Hawk. It is the most original and distinctive automobile crafted in America, styled to match the tempo of our times. Its unique flowing lines are aerodynamic. Its fins: functional. It is designed with that imaginative flair you only expect to find in Europe's most fashionable automobiles. Faithful to its thoroughbred breeding, the Packard Hawk is a luxury automobile with smooth, soft leather seats and elegant, tasteful interior appointments.

Extra Power from Built-in Supercharger

Its appearance is complemented by power from a highly efficient V-8 engine with a built-in supercharger, capable

of instantaneous acceleration, or smooth performance under the most trying conditions of stop-and-go traffic. The supercharger with variable speed drive cuts in automatically as needed, for acceleration or extra power for passing or hill climbing, but when not in use, costs nothing extra in gasoline. It is a design for power, with economy.

The Packard Hawk is the new car with a regal air that immediately distinguishes its owner as a man of position. Put yourself in that position... behind the wheel of a Packard Hawk, soon.

Studebaker-Packard offers the most varied line of cars in America. See them all... economy cars... sports cars... station wagons... luxury sedans and hardtops.

Visit your
Studebaker-Packard Dealer today!



Studebaker-Packard
CORPORATION

Where pride of Workmanship comes first!

Directors Peer Into the Mirror

● Accustomed to attack from without, the board of directors is now turning to criticism from within. In a recent symposium, directors tried a little self-analysis.

● The findings: It's pretty much up to management whether a company's board functions effectively.

● Most bosses want a better board at their side, but there's less agreement on how to get one—or on what its proper role in corporate life should be.

As an institution, the board of directors of the U.S. corporation is used to criticism. It has taken volleys of abuse from various sources—among them stockholders and students of the U.S. economy.

Now directors and top management are at it themselves.

The reason for this search after answers is the profound change undergone by the U.S. corporation in the past generation, both internally and in its relationship to the world. The momentum now is such that even faster changes might come over the next generation. At the same time, the board of directors has been in transition—but perhaps not fast enough. It may still manage to meet its legal obligations as the corporation's controlling organism and the owners' representative. But is that sufficient?

• **Brass Chats**—The most recent discussion of these problems was a symposium for directors jointly sponsored by the McKinsey Foundation for Management Research and Columbia University's Graduate School of Business. Most of the conversations were reproduced verbatim—although without direct attribution, so the participants would speak more freely—in a just-published book, *The Director Looks at His Job*. The title is possibly misleading. Most of the men were directors—of their own and occasionally of other companies. But nine of the 13 were deeply involved in management, six of them as chief executive of their own company. So their views may more accurately be management's slant on the board of directors.

The brass-studded roster of participants ran as follows:

John T. Connor, president of Merck & Co., Inc.

David H. Dawson, vice-president of E. I. du Pont de Nemours & Co.

Charles G. Mortimer, president of General Foods Corp.

M. J. Rathbone, president of Standard Oil Co. (N. J.).

Joseph P. Ripley, chairman of Harman Ripley & Co., Inc.

H. J. Heinz, II, president of H. J. Heinz Co.

Adolf A. Berle, Jr., professor of law at Columbia University.

David A. Shepard, director of Standard Oil Co. (N. J.).

Charles R. Tyson, executive vice-president of John A. Roebling's Sons Corp.

J. Alex Smith, director of McKinsey & Co., management consultants.

Vannevar Bush, president of the Carnegie Institution, director of American Telephone & Telegraph Co.

Sigurd S. Larmon, president of Young & Rubicam, Inc.

Harold F. Smiddy, vice-president of General Electric Co.

• **Broad Vista**—From their recorded conversations, bolstered by *BUSINESS WEEK*'s own interviews with a number of other directors, some trends stand out clearly:

• The average board—as most are structured at present—does not give adequate direction to its company.

• Every company has a different type of board problem. But even so, the chief executive's attitudes very largely determine the effectiveness of the board.

• Most chief executives would like a "stronger" board that they could use more effectively—and are seriously concerned about how to achieve it.

• Even if "better" boards could be obtained, the question of their proper role remains unresolved. It's necessary to define more precisely the relationships between stockholders, board, and executive management.

• **Maturing Board**—Not long ago, most U.S. companies were owned or controlled by individuals. The owner-executive considered his board purely a legal necessity. He filled it with relatives, employees, maybe his banker and lawyer. But with the rapid shift to widespread public ownership, plus the tre-

mendous growth and wider diversity of most corporations, the board has had to adjust.

Today, notes E. Everett Smith, director of McKinsey & Co. and a specialist in management-board relations, all kinds of boards exist—from the old owner-controlled type to groups of full-time board members removed from line operating responsibilities. "With the transition still going on, there's been no clear philosophy, guiding principles, or working method developed." With Dean Courtney C. Brown of Columbia's B-School, Smith was co-chairman of the symposium and co-editor of the book. He suggests: "The real issue is the vital need for making the board an effective functioning instrument."

How do you know whether a board is functioning properly? "You can't tell by looking at the highly successful enterprise. Weaknesses only show up when an enterprise falls from competitive grace or major problems come to the surface," says Smith. "The question is whether the board is so organized that it can protect the business against basic weaknesses." With the economy right now in transition, basic weaknesses may show up more glaringly than over the past booming decade.

• **Dual Role**—In theory, the director is the direct representative of the mass of stockholders. Says one symposium member: "Prime responsibility of the board is to insure to the shareholders the maximum protection of their invested capital, an adequate return on it, and to provide adequate management for the company."

Directors have a certain amount of so-called "boiler-plate" work—declaring dividends, approving mergers or sales of assets, electing a chief executive. In addition, each director has a definite legal responsibility—with his personal fortune at stake—for the well-being of the corporation.

But some members of the symposium suggested that today's corporation is so much a key to American life that directors are also responsible to employees, customers and suppliers, and the community. One of the participants noted dryly: "As a director of the XYZ Co., I do not purport to represent the public." But the consensus seemed to be that the corporation now has to be as much a citizen as a money-making enterprise—and the board has to make sure it does both.

• **Detached From Operations**—Even though a board has legal responsibility to "manage" a corporation, no board can run a company. Only management itself has the necessary knowledge, the flexibility to meet day-to-day problems,

RUNNING A "WALKATHON" IN YOUR OFFICE?



GET RCA MULTI-COM

Now you can convert walking time into working time in your office—by installing smartly styled, compact RCA Multi-Com on key desks. Multi-Com puts essential personnel, records, and statistics within fingertip reach of decision-makers. Flick a switch on your Multi-Com master instrument and you get your man instantly. Efficiency goes up because more people stay at their desks. Information flows faster, work gets out more quickly. Regular switchboards are free to handle a larger volume of outside calls.

To plan an RCA Multi-Com system that suits your inter-office communication needs exactly, call your RCA Engineered Sound Distributor... listed in the Yellow Pages under "Sound Systems" or "Intercommunications Equipment." Or write direct for more information. Dept. AC-26.



FOR INTERCOM... BUY MULTI-COM



**RADIO CORPORATION
of AMERICA**

SOUND PRODUCTS • CAMDEN, N. J.

"... the group agreed that day-to-day operations are not the province of the board..."

STORY starts on p. 57

and the close contact with all ramifications of the business.

Sidney Weinberg, partner in Goldman, Sachs & Co., and perhaps the best known of today's crop of directors, although not included in the symposium—points out that "unlike the operating executive, no individual director has any power—except during an official board meeting, and then only if a quorum is present." Even then, others note, he is only as effective as his information—and his desire to be effective.

• **Plotting Policy**—The group agreed that day-to-day operations are not the province of the board, but there was less unanimity on what role the board should play in developing company objectives and strategy. Some felt management might formulate policy, subject to review and approval by the board.

Others—perhaps representing a fairly common management viewpoint—argued that once the board has elected a good management, it should leave it alone—until it slips. On the other side of the fence, Weinberg maintains that "a board isn't worth a thing unless it can be used as an anvil to hammer out policy."

There was little question that companies now make more use of directors—and that breaking the board into committees (auditing, finance, compensation, executive) broadens its scope. But since a committee setup delegates much of the board's authority to a still smaller group, and many of these are made up largely of "inside" management, some argue that it removes the remaining directors even further from accepting responsibility.

• **Group of Judges**—The executive-directors in the symposium were in accord on what they want from a board. One put it this way:

"Every executive can get a 'cabinet.' He's got his subordinates in active management to give him information and recommendations on which he can base his decisions. But the chief executive has both the right and responsibility to be judged by an independent group who were not participants in the original plans. He's got to have a boss to whom he is accountable."

Another added: "I never want to be a chief executive with that element lacking. I have been, and I know how damned uncomfortable it is. It's a different thing to walk into a group who are your judges and say, 'Gentlemen, this is my program.' Let them attack it, you defend it, and when you finally

come out of there, you know it's all right to go."

To do this, it was suggested the board member need not be familiar with the mechanics of a business—if he is supplied with the necessary facts and arguments. This in theory is what a board does—but most agreed that few do it successfully.

• **Management on Top**—The biggest single problem is domination of the board by either the chief executive or the management group. In most cases, power actually flows from management to the board—not the reverse:

• **Management**—usually the chief executive—reports to stockholders and the public.

• **Management**, by and large, selects the board. Unless there's a proxy fight, stockholders seldom offer nominations, rarely know who directors are. (One director notes a tendency to sprinkle board lists with "names" the public will recognize, "but a good general, actor, politician, or baseball player is not necessarily a good director.")

• It's fairly natural for the chief executive to look for directors who will generally agree with him. In fact, one symposium member suggested that decisions should be unanimous, and a director who frequently disagreed should resign.

• The chief executive, by his choice of facts to present to the board, influences their decisions. With the possible exception of auditing committees, the idea of directors going around management to get information was definitely frowned upon.

In effect, the group agreed that whatever the type of board, it can only be as effective as management chooses.

• **Composition Troubles**—The panel members found no type of board member without problems. Most of them were "inside" directors themselves. Even so, they generally agreed that it's difficult for the working executive to criticize or oppose his superior. And he is in the position of judging policies and programs for which he may have been responsible.

The "outside" director can be more independent, bring a wider diversity of viewpoints, and look at programs more objectively. But the outsider may not understand the business so well; too many of them accept directorships for social contacts or prestige, and far too many show up one morning a month without having "done their homework."

Outside directors interviewed by BUSINESS WEEK tended to agree. One sug-



For some situations, there's only one finish!

... whatever your situation, Glidden has the coating for you.

When your product encounters corrosion-causing conditions, give it complete protection with Glidden Nu-Pon*, the epoxy primer that offers outstanding adhesion to metal, combines all required resistances with thin-film economy.

When consumer eye-appeal plus long-lasting protection are vital, use Glidden NUBELITE*, the modified alkyd enamel topcoat that affords

*A Glidden Trade-Mark

superior color and gloss retention, provides the film-building qualities necessary for maximum impact and abrasion resistance, film toughness and flexibility.

Whether you make appliances, garden tools, office furniture or any other product, consult one of our Technical representatives who can recommend a protective coating that will improve product quality and, perhaps, return considerable savings.

GLIDDEN
THE GLIDDEN COMPANY
INDUSTRIAL PAINT DIVISION

900 UNION COMMERCE BUILDING • CLEVELAND 14, OHIO



Sales Offices and Factories:

San Francisco • Los Angeles • Chicago
(Nubian Div. - 1855 N. LaSalle Avenue)
Minneapolis • St. Louis • New Orleans
Cleveland • Atlanta • Reading
Canada: Toronto and Montreal



Above: Ceco's Door-Frame-Hardware "Package" was selected for Long Island's new \$30-million Roosevelt Raceway (Business Week, Aug. 10, 1957). Arthur Froehlich & Associates, Los Angeles and Philadelphia, architects. George A. Fuller Co., contractors.

Left: Commercial and industrial enterprises employ the Ceco Door-Frame-Hardware "Package" for top door performance. This example was designed by Cities Service Staff, architects. General Builders, Lafayette, Ind., contractors.

WHY BUY DOORS

"A LA CARTE?"

Ceco's Complete Door-Frame-Hardware "Package" assures longer door life . . . better performance . . . finer quality.

Doors are the most used part of a building. They are opened and closed constantly. To perform well, without costly maintenance, they must be ruggedly assembled into their frames and with their hardware. But when doors, frames and hardware are obtained from separate sources, trouble brews. Ceco eliminates that. For Ceco's "Package" consists of Hollow-Metal Doors, Door Frames, Side-lights and Hardware all prepared for assembly without expensive on-the-job fitting and drilling. With Ceco accepting responsibility for all components, you make your door assemblies last as long as your building. There's no better way to buy . . . no better way to save. So insist on the Ceco Door-Frame-Hardware "Package." Talk to your architect or write for details. Ceco Steel Products Corporation. Sales offices, warehouses and fabricating plants in principal cities. General offices: 5601 West 26th Street, Chicago 50, Illinois.



IN CONSTRUCTION PRODUCTS CECO ENGINEERING MAKES THE BIG DIFFERENCE

Doors, Windows, Screens / Steel Joists / Steelforms / Concrete Reinforcing / Metal Lath / Roofing Products

gests that he feels useful on perhaps one-third of the boards he's on. Another says fewer than 10% of his fellow directors have prepared for their meetings.

Several men in the symposium felt one answer might be more full-time directors, such as Standard Oil's and du Pont's. Most of these have come up through the ranks, but as directors are divorced from any operating responsibility. This, in theory, gives them wide knowledge of the business, still leaves them independent of the chief executives and of administration of policy they advocate. But this can lead to an ingrown board, it was argued in opposition. There were suggestions that a balanced board might consist of two insiders, the chief executive and his second-in-command, plus full-time and outside directors divided half and half.

• **Men Wanted**—A frequently recurring question about directors was: "Where do you find them? And how do you get them to serve?"

Many participants were reluctant to draw deeply from top executives retiring at 65, for fear of saddling themselves with "too old" a board. They were even less enthusiastic about active executives from other companies, who have so much pressure on their time already that it's difficult for them to give adequate attention to the affairs of several differing companies.

As one incentive, compensation of directors has been rising. Even part-time outside directors now receive anywhere from \$3,500 to \$15,000 a year, and one director reports he has been offered substantially more as an incentive to serve. But for men of the caliber companies want, taxes generally wipe out this sweetening. Besides, it's a rare rising executive who will give up the excitement of operating management for even the well-paid anonymity of a full-time directorship.

• **Plan of Action**—Everett Smith suggests this program for the chief executive who wants a constructive board:

- Think through what he expects from a board and put that into a written statement of responsibilities.

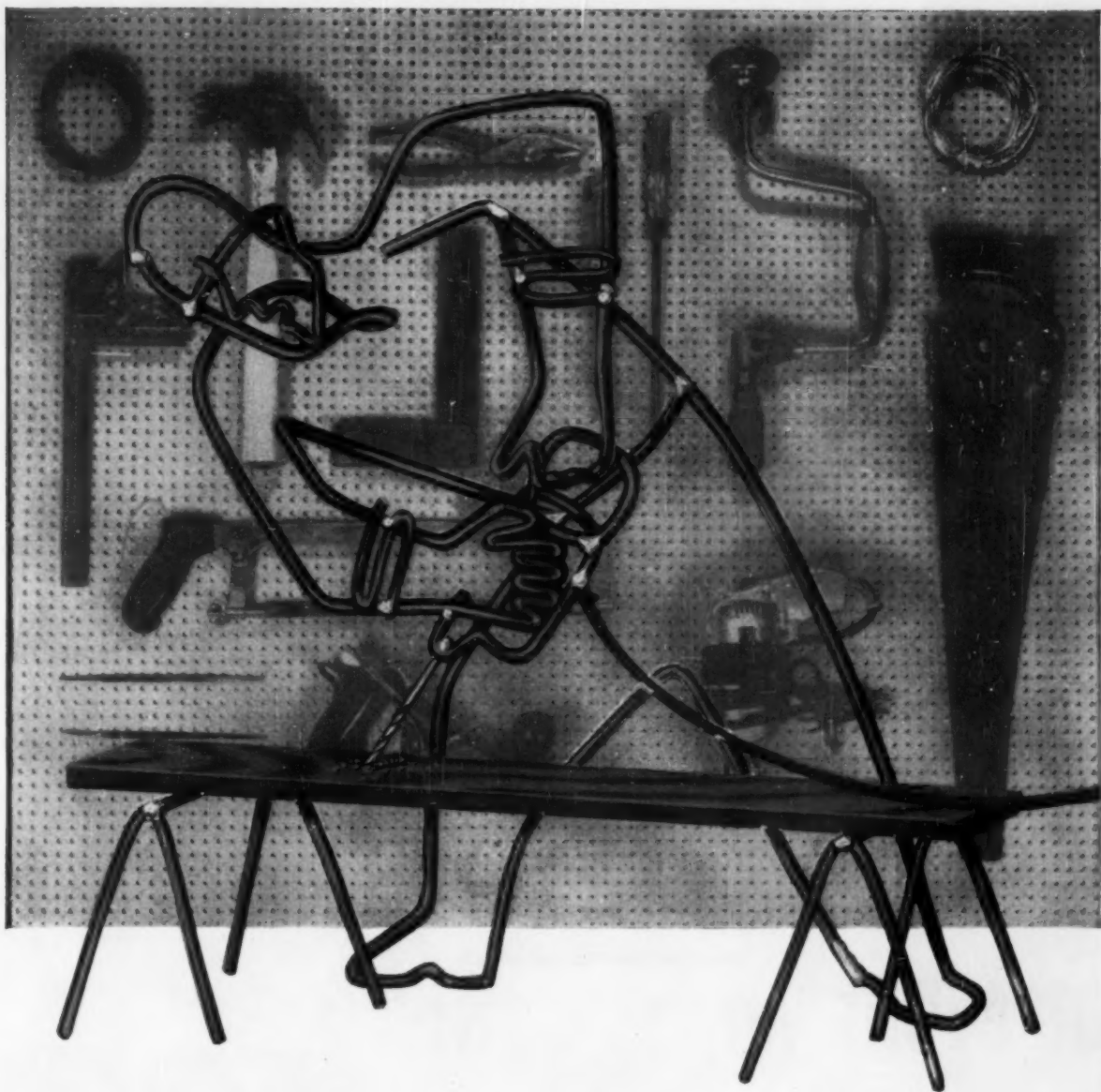
- Develop specific criteria against which the board can judge the company's health.

- Subdivide the board into revolving committees, each to be thoroughly familiar with a specific segment of the business.

- Prepare agendas and background information well in advance of every meeting.

- Decide exactly what kind of man he wants on the board—and then recruit him just as he would a top executive.

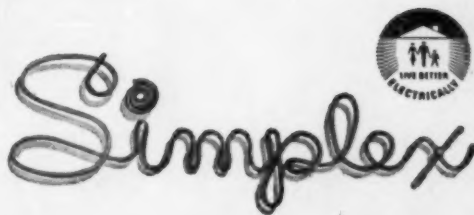
- Compensate directors just as he would executives—in relation to qualifications and performance. **END**



A new room has been added to the American way of life. It's the hobbyist's home workshop, where "do-it-yourself" is doing a multi-million-dollar business.

Simplex cables, cords and wire are basic components of this booming power tool business . . . and for the same reason that Simplex is the first name in industry wherever the reliable transmission of power is vital to efficient industrial performance or consumer product quality.

If you have a product or a problem that involves the transmission of electrical energy, you too can rely on the Simplex reputation for advanced engineering, service and supply . . . **SIMPLEX WIRE AND CABLE CO.**, Cambridge, Massachusetts and Newington, New Hampshire.



Highest quality cables for: Mining • Power & Lighting • Construction • Transportation • Communications • Signalling

Which System DO YOU NEED?



TC-100 System is a low-cost, reliable industrial television system ideal for most applications. The TC-100 Camera may be connected directly to Du Mont picture monitors or to standard television receivers.



TC-200 System is designed for the most critical operations requiring maximum resolution. TC-200 Camera is extra-compact. Associated circuitry and camera controls are separate unit. Used with Du Mont picture monitors or standard television receivers.

DU MONT® MAKES BOTH!

PLUS... All types of accessories making industrial television practical for any installation for any purpose. Either system may be remotely controlled so camera may be moved from side-to-side, up-and-down, focused, and lenses changed from a remote position. Du Mont supplies everything you need for a complete industrial television system—everything matched to work together.

Du Mont IT is demonstrated, sold, installed and serviced by local contractors from coast-to-coast...



INDUSTRIAL TELEVISION DEPARTMENT BW57
ALLEN B. DU MONT LABORATORIES, INC.
760 Bloomfield Ave., Clifton, N. J.

- ☐ Send complete details
☐ Arrange a demonstration at my convenience

Name _____ Title _____

Company _____

Address _____



Frederic N. Schwartz

One-Time Assistants Reach Presidencies

Two men who got their training as assistants to the president (BW-Oct.19 '57,p193) are now taking over the presidency at their companies. Frederic N. Schwartz (above), 51, advances at Bristol-Myers Co. from the presidency of Bristol Laboratories, a subsidiary, and becomes the first non-member of the Bristol family to head the pharmaceutical company.

Charles E. Spahr (below), 44, a transportation specialist who has been executive vice-president of Standard Oil Co. (Ohio) since February, 1955, is the new president there. Clyde T. Foster, 64, former president still retains the job of board chairman and chief executive officer.



Charles E. Spahr



this much Chlorinated TSP...

Compounds of detergents for mechanical dishwashers know that about a 50/50 mixture of Victor chlorinated trisodium phosphate and other phosphates makes today's dishwashing job a real snap... even on "the night before Christmas".

Thanks to this remarkable chemical, glassware, dishes, and flatware are washed, rinsed, and dried without tell-tale spots or rings... and the chlorine provides an anti-septic plus that's hard to beat.

It's hard to beat Victor for service, too! Suppose you need a sample of a certain Victor chemical to work on some special project. If you tell us which one to send, we'll have it on its way before you can say, "It pays to see Victor". Write on your company letterhead to: Victor Chemical Works, Box 603, Chicago 90.

VICTOR
Detergent Name in
Chemicals
for 60 Years





this much Dical...

As a cleaning and polishing agent for dentifrices, Victor dicalcium phosphate is the favorite among most of the leading brands. This special dentifrice grade dical, often used in a 50/50 combination with other ingredients, is so effective that even the favorite doll enjoys having her teeth cleaned.

Dentifrice manufacturers have learned that they can depend on Victor quality for either dicalcium or tricalcium phosphates for toothpaste or powder. And they've known this for a long time. After all, Victor was the first producer to receive the acceptance of the Council on Dental Therapeutics of the American Dental Association.

You know that there are very few problems that are *child's play* today... especially if chemicals are involved. And that's where Victor may have the edge... if you are considering the advantages of phosphates, formates, or oxalates, we've been producing some of these favorites for over 60 years. So, when you are ready to *play for keeps*, tell us which Victor chemical you need, and we'll have a sample on the way before you can say, "It pays to see Victor". Write to: Victor Chemical Works, Box 603, Chicago 90.



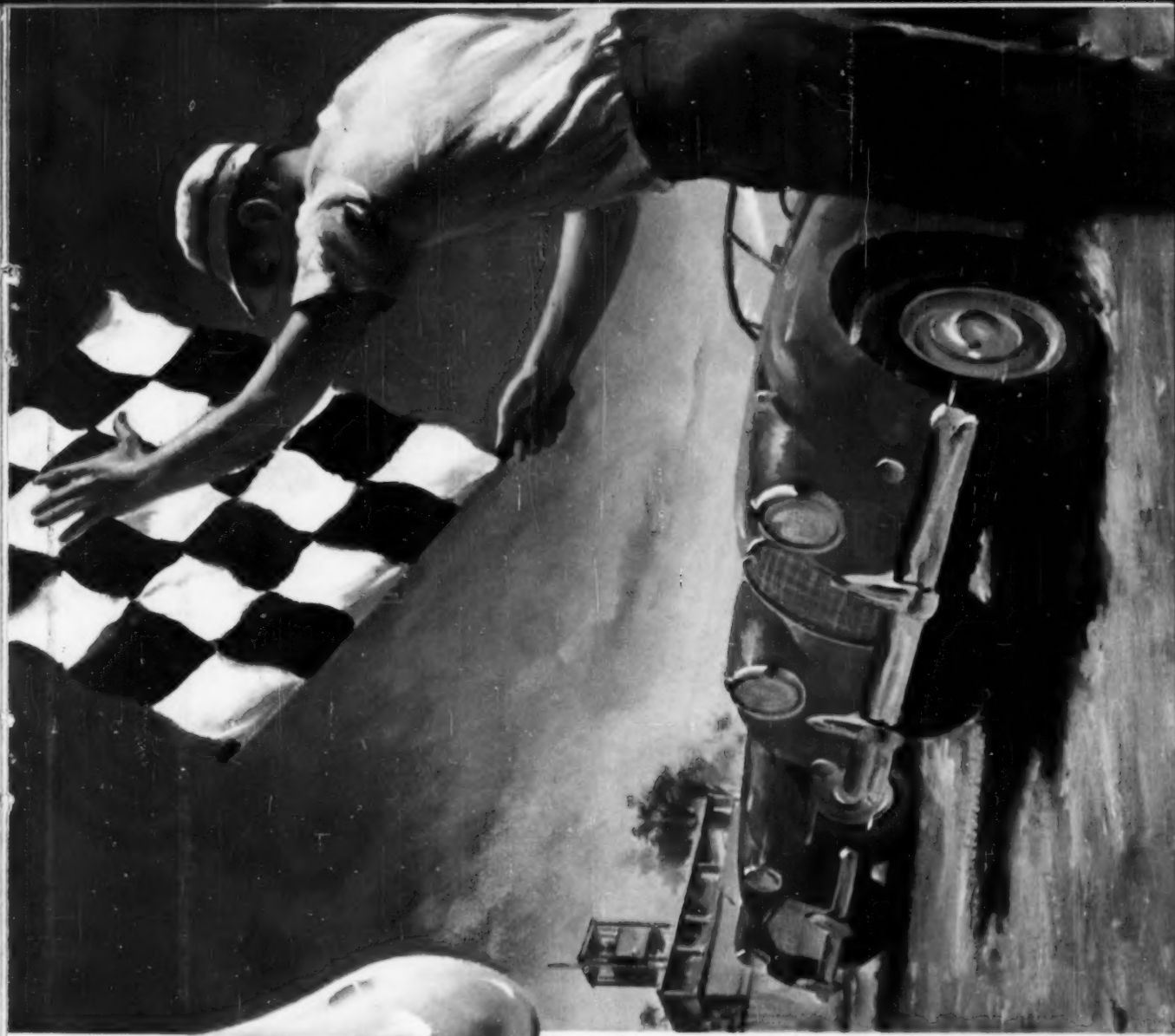
this much Oxy...

Oxy- (from the Greek word oxy) means keen, acid, or quick. And a little Victor phosphorous oxychloride, as an intermediate, is quick to combine with other chemicals to make the modern gasoline additives so necessary for today's high-compression engines.

Victor oxy and trichloride are versatile and popular intermediates in chemical manufacturing and drug synthesis... quickly combine with other elements because of their effectiveness as chlorinating agents.

How about your products? If you're looking for new chemical combinations... and wonder how Victor phosphorous chlorides will help in your development work... here is a good intermediate step to take. Specify, on your company letterhead, which Victor chemicals you're interested in, and we'll have a sample in your hands before you can say—it *pays* to see Victor. Write to: Victor Chemical Works, Box 603, Chicago 90, Illinois.

VICTOR
Dependable Name in
Chemicals
for 60 Years





this much Tripoly...

It takes about one teaspoonful of Victor sodium tripolyphosphate, in combination with other chemicals, to knock the spots off a sinkful of dirty dishes . . . that's typical of today's dynamic detergents.

Soapers select sodium polyphosphates, either tripoly or tetra, for their synergistic action with detergents . . . a powerful, outstanding advantage of these versatile chemicals.

Selecting the best source of supply for phosphates, formates, or oxalates is easy, if you ask us, because Victor has 60 years of experience and plants strategically located from coast-to-coast. It's easy to get samples of Victor chemicals too—for evaluation and comparison. Just specify on your company letterhead, and a sample will be in your lab before you can say—it *pays* to see Victor. Write to: Victor Chemical Works, Box 603, Chicago 90.

In Washington

. . .

West Coast Crude Oil Imports To Come Under "Voluntary" Curbs

The Eisenhower Administration's "voluntary" program of restricting crude oil imports is about to spread to the West Coast.

Last July 29 the government asked oil companies to hold the line on imports into the area east of the Rockies—and, in general, they have been complying. However, the original plan excluded the West Coast, an oil deficit area. Now it has been disclosed that West Coast imports will be more than expected.

As a result, the President's Cabinet Committee on Oil Imports, in a report set for release this week, suggests that importing companies voluntarily limit themselves to bringing some 220,000 bbl. per day into the area—30% under their present program. The implication is clear that mandatory controls may be imposed unless the importers go along.

. . .

New Lures Draw Only Two Nibbles In Lease-Purchase Building Plan

The General Services Administration so far has found only two takers for its revived lease-purchase program for federal building projects. This is despite an attempt to lure more bidders by dropping the 4% limitation on interest rates and adding other inducements.

The only response came from Bankers Life Co. of Des Moines, which offered to finance four of the eight projects proposed by GSA, and Equitable Life Insurance Co. of Iowa, which bid on one job. Between them, the two were willing to ante \$22.3-million, at interest rates ranging from 4.74% to a flat 5%.

"We are not discouraged by the dearth of bidders," a GSA spokesman said. "Nor are we encouraged," he added.

. . .

FTC Poses Restraint of Trade Test For Makers of Psychological Tests

The nation's four biggest publishers and distributors of psychological tests face a stiff test themselves.

The Federal Trade Commission this week filed a restraint of trade case charging that the four companies are engaged in an illegal conspiracy to restrict the distribution of their products. Named as parties to the case are Psychological Corp., Science Research Associates, Inc., World Book Co., and the California Test Bureau—all of which compose and sell vocational, aptitude, and psychological tests and materials for conducting them.

According to FTC's complaint, the companies are the

only source for many of the materials used in such tests. They allegedly agreed sometime before 1955 to keep out competition by refusing to sell their materials to anyone who uses them to give tests by mail.

The result of such refusals and boycotts, says the commission, is that outsiders have been unable to buy the tests and related materials for their own use or for resale. FTC says the four companies exchange lists of those who conduct tests by mail in order to keep track of possible rivals and cut off the source of supply.

FTC staffers say certain of the tests sold by the four concerns are the most generally approved in the field. Many universities use them in testing student aptitudes.

. . .

AEC, Joint Congressional Committee Meet for Palaver on Power Policies

Staffs of the Joint Committee on Atomic Energy and the Atomic Energy Commission sat down together this week to talk about the much-criticized atomic power program.

The meeting resulted from an invitation sent by Rep. Carl T. Durham (D-N.C.), chairman of the joint committee, to AEC Chmn. Lewis Strauss. Durham cited recent evidence that the power program was inadequate and needed improvement. He appealed, too, for more cooperation between the joint committee and the commission—something that has been lacking in the past two years.

As the meeting began, however, it looked as if chances for more amity were slim. In his response to Durham's invitation, Strauss termed present nuclear power policies and goals "clear and sound" and progress toward them "satisfactory."

. . .

Foreign Trade Group Backs Administration Program, Voices Doubt on China Policy

The Commerce Dept.'s much-publicized new Industry Advisory Committee on Foreign Trade held its first session in Washington this week—and, as a group, it issued little in the way of concrete recommendations.

The 60-man body includes representatives of every shade of opinion on the Administration-backed liberal trade program that's due for such searching review by Congress next session. The closed-door meeting was run by Henry Kearns, Assistant Secretary of Commerce for International Affairs, as a forum with two purposes: (1) to air industry's complaints on trade programs, and (2) to explain and promote the Administration's own views.

Among the sentiments Kearns noted in the group:

- "Considerable support" for the White House's proposed extension of the Reciprocal Trade Agreements Act (page 79)—but with "prescribed limitations" on imports that might injure domestic producers.

- Surprisingly, "doubt and some criticism" of the current U.S. ban on trade with Communist China.

The committee will now be polled by mail for more detailed views. It will meet again in Washington Mar. 3.

Nestle Bolsters Its Outposts



DR. CARL JULIUS ABEGG, head of the Nestle Alimentana empire, has earmarked \$15-million for expansion of capacity in the U.S., where competition is hottest. He's helping set strategy for Nestle to grab bigger share of the instant coffee market in the U.S.

Giant Swiss food producer is pushing \$60-million expansion program abroad—in the face of a worldwide business slowdown.

Switzerland's Nestle Alimentana, one of the world's largest manufacturers of food products, is heading into 1958 convinced that the free world's growing appetite will provide even bigger markets for Nestle products.

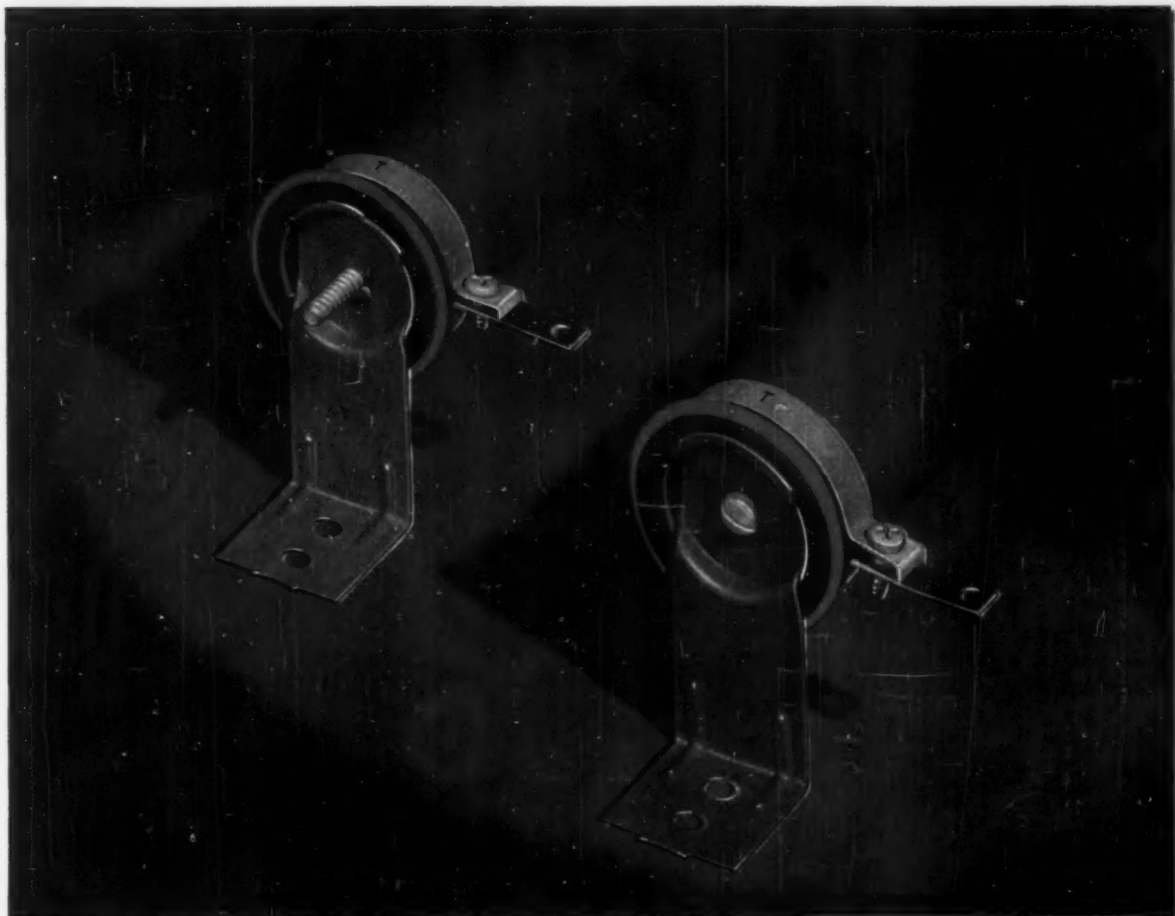
To prove its faith, Nestle is putting \$60-million into new factories and offices around the world. Of this sum, \$15-million is tagged for larger offices and more capacity in the U.S., where the competition is hottest. Among other things, the U.S. headquarters is getting a new \$4-million building at White Plains, N. Y., according to the president of the American company, Hans J. Wolfisberg, who has worked in buying and selling operations for Nestle around the world.

Even for a company as big as Nestle, whose annual sales run over \$1.2-billion yearly, this is a sizable expansion program—and it's being financed entirely from plowed-back profits. What's more, it comes at a time when many other big companies are cutting back in the face of a general business slowdown.

• **Fourth Biggest**—As a food producer, Nestle ranks fourth in the world—behind Swift, Armour, and National Dairy. Nestle accounts for over 10% of the chocolate consumed in the world, gets most of its milk supplies from a herd of 1.5-million dairy cattle, and is the world's largest producer of instant coffee. Among foreign manufacturers of all kinds, it ranks sixth.

The company has 130 plants in the free world (10 in the U.S.), and employs about 56,000 people. For operational and financial purposes, the company has three large divisions—Western Europe with 28,000 employees; the sterling area with 13,000; and the Western Hemisphere and Pacific (Philippines) with 15,000.

• **Versatile General**—Directing this enormous manufacturing and marketing organization is Dr. Carl Julius Abegg (pictures), a 67-year-old Swiss patrician. Abegg moved up from vice-chairman to president and chairman in 1948. In addition to being Switzerland's top businessman, Abegg is a writer, philosopher, composer, and head of one of the richest families in the Helvetic Confederation. The Abegg family is the largest single shareholder of Nestle stock,



Engineered by Tinnerman...

4 SPEED NUTS® eliminate 8 parts in resistor assembly, cut costs 50%!

Tremendous assembly savings are often possible when Tinnerman SPEED NUTS are "designed into" new products. This is an example: Corning Glass Works, Corning, New York, adopted 4 special SPEED NUT brand fasteners and cut assembly costs on new power-type glass resistors by 50%!

Assembling power resistors is normally a slow and complex operation. Yet a pair of one-piece, spring-steel SPEED NUT angle brackets eliminated 4 of the 9 parts required by another fastening method and cut assembly time to a few seconds!

These corrosion-resistant, vibration-proof fasteners hold the resistor under live spring tension to avoid mechanical shock. Locating washers, lock washers and nuts are eliminated. Also, one-piece SPEED CLAMPS® that double as terminal bands eliminate 2 lock washers and 2 nuts.

SPEED NUTS permit maximum assembly savings on new products, but you can probably make worthwhile savings *right now* on current products.

Over 8000 types available. See your Tinnerman representative or write for Bulletin 333-1.

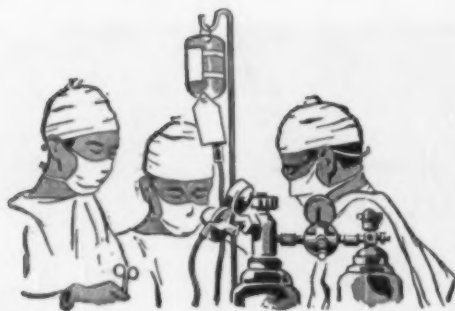
TINNERMAN PRODUCTS, INC.
BOX 6688 • DEPT. 12 • CLEVELAND 1, OHIO

TINNERMAN

Speed Nuts®



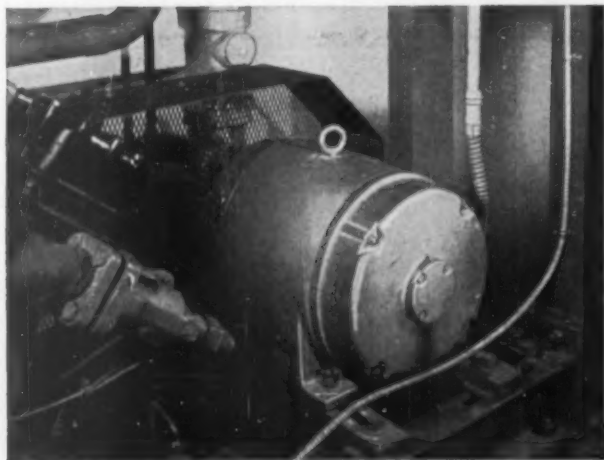
FASTEST THING IN FASTENINGS®



**Blood Banks
must
NEVER
FAIL...**



**Vital refrigeration units in St. Louis Blood Bank
are powered by Wagner Motors**



This 30 horsepower Wagner high torque, open type motor drives the refrigeration unit for the blood storage room in the St. Louis Blood Bank.

Wherever there is a motor application of a critical nature—even vital to life itself—Wagner Motors can be relied upon to fulfill their responsibility of completely dependable operation. In St. Louis' Blood Bank, for example, you'll find many Wagner Motors at work—driving the all important refrigeration units that keep the blood at proper storage temperature, that operate air conditioning compressors, that move heated and cooled air to keep the building comfortable in winter and summer.

Whether your motor application is vital to life or not, you can depend on Wagner Motors for efficient, reliable operation.

The complete line includes motors from $\frac{1}{8}$ to 600 hp, singlephase or polyphase, in a wide variety of enclosure types and mountings. Let your nearby Wagner Sales Engineer help you select the right motors for your needs. Call the nearest of our 32 branch offices, or write direct.

Support your Local Blood Program by donating blood *regularly*!



...to help America **LIVE BETTER**—Electrically

Wagner Electric Corporation
6460 Plymouth Ave., St. Louis 14, Mo., U.S.A.



WM57-10

ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES • AUTOMOTIVE BRAKE SYSTEMS—AIR AND HYDRAULIC

(Story starts on page 68)

which is considered the most prized blue-chip stock traded on Swiss exchanges.

However, a large amount of the company stock is held by small investors in Switzerland.

Abegg gets most of the credit for the fact that company sales are now six times larger than prewar. This is no small achievement, considering the economic dislocations and currency restrictions that have plagued many parts of the Western World during the post-war period. Last year, for example, in Western Europe, Nestle processed 11% more fresh milk, 24% more chocolate, and 31% more coffee and cocoa beverages than in 1955.

• **Milestones**—Two important developments have contributed to this spectacular growth. Soon after he became chairman, Abegg pulled off a merger with Maggi of Switzerland—an established firm doing a \$100-million-a-year business in sauces and dehydrated foods, mostly in Western Europe. As a result of the merger, Nestle added Alimentana (meaning "foodstuffs") to its name. Maggi has a plant in New Milford, Conn., and the company is beginning to push its products hard in this country.

Even more important, to its sales, Nestle launched a world-wide campaign to sell Nescafe, the instant coffee that was developed in the company's labs just before World War II. Nestle's prewar research has paid off handsomely. Today, instant coffee is the company's biggest sales item in the U.S. Sales have kept pace with the increased popularity of instant coffees, which now account for 30% of all coffee consumed here.

Nestle is still pouring new money into expansion of Nescafe production. For instance, this month the company contracted for a \$1-million Nescafe plant addition in California. The company is also spending heavily for advertising: Earlier this year, it placed a \$200,000 ad in *Life* depicting the history of coffee drinking.

• **Blend to Suit**—Nescafe is blended differently for different markets. In the U.S., the product is sold in four versions. There is a weak blend, a strong blend, a third with chicory added for the New Orleans' market, and recently a caffeine-free instant coffee was introduced.

In Western Europe, Latin America, and the sterling area, the drink is blended to suit the country—and even the regions of some countries. In some areas, belated postwar competition has never challenged the Swiss position, which amounts to a near monopoly. Even in coffee crop countries such as Colombia, Brazil, and Mexico, Nestle

does a big business in instant coffee.

In addition to Nescafe and Nestea, an instant tea, the Swiss company makes Quik, an instant chocolate-milk drink, and an instant cocoa for the U.S. market. It also produces bouillons, sauces, dehydrated soups, protein foods, and the older condensed milk and chocolate candy products. Besides these, it manufactures high-grade coating chocolate in bulk for use by many U.S. candy makers.

Nestle sells enough chocolate products today to put it in second place in the U.S. market. Its plant near Fulton, N. Y., processes chocolate on a 24-hour schedule, and turns out more of the foodstuffs than the combined production of 16 other Nestle chocolate plants around the world.

• **Big Customer**—Nestle, of course, is a big world buyer of green coffee and cocoa beans from Latin America and Africa. It also buys pulses and vegetables in large quantities in Western Europe. But fresh milk is still the biggest commodity Nestle uses in its products, such as milk-chocolate, condensed milk, and processed cheeses. Last year, in each of three West European countries alone, Nestle plants consumed over 44-million gal. of fresh milk.

Milk production in Latin America has been increased by flying in dairy stock and encouraging local agriculture. Today, cows are pastured in the thin Andean air of South America. Much the same thing has been going on in Western Europe for a long time, but today it is more modern. For example, polyethylene pipelines tap off milk given by cows in summer pasture lands at 7,000 ft. in the Swiss Alps.

• **Expansive Program**—Nestle produces almost all the tin cans and other containers it needs. It operates a tin container factory—for instance—in Ripon, Wis., and a big new container plant is going up in Cuba.

The Cuban factory is a tiny phase of Nestle's over-all expansion program, which began last year. The company is building new facilities, enlarging old ones, and installing new plant machinery all over the world. In West Germany, Norway, and Italy, it has expanded facilities for making sweetened condensed milk. In France, it has installed new spray-drying and sterilizing equipment. In Britain and the Netherlands, it is adding new plant space for its Maggi products. There's new equipment going into the Nestle plant at Freehold, N. J., for taking the caffeine out of coffee. In Canada, the company is enlarging its Chesterville (Ont.) plant for powdered milk. And a new powdered milk plant is going up in Brazil.

• **Baby Days**—Nestle began in Switzerland in 1868 as a producer of milk food for babies. Henri Nestle, a chemist in Vevey, near Lausanne, hit on a formula



CHMN. ABEGG counts on growing appetite of the free world to expand sales.

for feeding babies with nutritional difficulties. The company grew rapidly, and soon started building abroad; its first U.S. factory was built in 1881.

Early in the game, Nestle got into the burgeoning Swiss chocolate industry, and in 1905 merged with the Anglo-Swiss Condensed Milk Co., which was set up primarily to export canned milk into the British Empire. Anglo-Swiss was the idea of two Americans—Charles Page, U.S. Consul in Zurich, and his brother George. The company, however, was Swiss-owned.

After the merger, the two companies combined their marketing outlets. Mainly to circumvent tariff barriers, they continued to set up manufacturing facilities abroad until, in the late 30s, they had 93 factories on five continents.

• **Reorganization**—About this time, the top management began to worry that the company was getting so big and sprawling that it would prove unmanageable—especially in the event of a European war. World War I had sealed off headquarters in Switzerland from the rest of the Nestle empire.

Nestle decided to reorganize the company's entire structure. The manufacturing companies and finance were separated, and Nestle and Anglo-Swiss were converted into a single holding company.

To round this out, Unilac—a holding subsidiary for the Western Hemisphere—was incorporated in Panama, with an administrative setup in Stamford, Conn. One major objective was to transfer sterling area control to the U.S. for the duration of the war. The number of Unilac shares issued duplicated the number of Nestle outstanding, and this



BOXES THAT NEVER STOP SELLING FOR YOU



CORRUGATED AND
SOLID FIBRE BOXES • FOLDING CARTONS
KRAFT PAPER AND SPECIALTIES
KRAFT BAGS AND SACKS

Take this fresh look at your boxes: do they excite sales action for your customers? Do they project your trademark, stress product features, clinch sales? Let Gaylord specialists in design and printing go to work. They transform "just boxes" into active sales-builders. They do it for others—can do the same for you.

Call your nearby Gaylord packaging engineer to get things rolling.

GAYLORD CONTAINER CORPORATION • ST. LOUIS

DIVISION OF CROWN ZELLERBACH CORPORATION

was given to holders of the latter on a share-for-share basis. Ownership of the stock and dividend rights are vested in the corresponding shares of Nestle, and Nestle stock is actively traded on the Swiss exchange for around \$575.

Last year, net profits were about \$10-million. The company's total assets reportedly are around \$90-million.

• **Nestle's Head**—Nestle's future operations, like those of the past 10 years, depend to a large extent on the thinking of Abegg. For one thing, his views on the European Economic Community or Common Market are important to the company. In fact, as chairman of Nestle, his views carry a lot of weight in Switzerland. (Zurich University gave him an honorary doctorate for his leadership in expanding Swiss trade.)

Abegg is known among his associates as an unassuming man. Although he is a Protestant, he recently wrote a life of Saint Theresa of Lisieux. He has published verse, and an oratorio he composed was performed at Bayreuth—famed for its Wagner festival.

Abegg got his start in business in Czarist Russia. Like many wealthy young Swiss, he went to work in his father's textile mills when he finished secondary school in Switzerland. One of these mills was in Russia. When the business was seized by the Soviets, Abegg went to work in other family textile interests in Bulgaria, Turkey, and Italy.

• **Banker**—Later in his career, he became a director of the Swiss Credit Bank, Switzerland's biggest bank, a position he resigned four years ago. He is chairman of Zurich Insurance, a member of the executive committee of the giant Swiss Re-Insurance Co., and a director of several Swiss insurance companies. Abegg's grandfather was a founder of the Swiss Credit Bank, the Swiss Re-Insurance Co., and other international enterprises.

Even today, the Abegg name is encountered frequently in the silk and textile industry of northern Italy—Abegg's only son is in textiles now and expanding into plastics—and in such large organizations as Italian Snia Viscosa, and the Banca Commerciale Italiana.

• **Integration Man**—Abegg favors gradual European economic integration, with Switzerland joining the Free Trade Area that is to be associated with the Common Market. He sees integration as an essential step to higher living standards. And with higher living standards, he expects higher consumption of Nestle products.

If Switzerland stays out altogether from the proposed European Free Trade Area, Abegg foresees dwindling exports from Switzerland—and the closing of some of Nestle's less productive plants in both the Common Market and the Free Trade Area. **END**

Short cuts with Recordak Microfilming

Latest reports on how this low-cost photographic process is simplifying routines for more than 100 different types of business . . . thousands of concerns



BRINGS AGENTS UP-TO-DATE

APPLETON, WISC.

How to get data on 600,000 policy record cards to its 44 agencies was a problem for Aid Association for Lutherans, world's largest fraternal insurance society.

Retyping was out of the question—too slow, too expensive. Investigation showed Recordak could do job fastest at lowest cost. Cards were run through a high-speed Recordak Microfilmer—completely accurate copies made even from cards on colored stock, from cards 50 years old. Then Recordak's Film Processing Center produced 3 x 5 prints, on double weight paper, directly from the microfilm records. Now, new agents have complete records on every policy held in their territory, and the others have up-to-the-minute details.



SPEEDS HANDLING OF DEALER PAYMENTS

FORT MADISON, IOWA

It used to take the W. A. Sheaffer Pen Co. 14 man-hours daily to balance payments from dealers and prepare cash journal sheets. Now payments are handled in less than 5 hours. New system made possible by Recordak Microfilming substitutes a film record of remittance papers for cash journal sheets. This also speeds Credit Department work—lets them check past receipts immediately in Recordak Film Reader. In addition, Recordak Microfilming cuts filing space and improves internal control.



LEND'S WINGS TO BOOKKEEPING

NEW YORK, N. Y.

You can call on Mercury Service Systems for prompt pick-up and delivery of anything ranging from an envelope to an elephant. Its 300 messengers handle some 2500 jobs per day in servicing 8000 steady accounts in greater New York area. But billing is no problem now that delivery receipts are photographed in a Recordak Microfilmer and sent out with bill.

This ends need for a description and listing of each charge. Only the ticket totals go on bill. Result: Mercury saves more than 200 hours monthly, and customer questions are answered in advance by sending the microfilm tickets back.

HOW YOU CAN PROFIT, TOO

Chances are Recordak Microfilming is now simplifying routines in a company same size as yours, same business as yours. Mail coupon for free booklet giving typical case histories and details on Recordak Microfilmers priced as low as \$550. No obligation.

Price subject to change without notice



"Recordak" is a trademark

RECORDAK

(Subsidiary of Eastman Kodak Company)

originator of modern microfilming—
now in its 30th year



..... MAIL COUPON TODAY

RECORDAK CORPORATION
415 Madison Avenue, New York 17, N. Y.
Please send free copy of "Short Cuts that Save Millions."

A-12

Name _____ Position _____
Company _____
Street _____
City _____ State _____

Selling U.S. Advice to Europe

● It's getting to be a bigger business for management consultants, as it has been for engineers, worldwide.

● U.S. firms are opening new offices abroad, expanding their staffs of experts on management knowhow. They build their clientele on contacts they already have.

● Other parts of the world seek U.S. management knowhow, too, but the demand is especially strong from Western Europe, scene of fast industrial growth.

Although Russia's Sputniks have somewhat shaken Western Europe's confidence in American technological leadership, respect for Yankee management methods stands as high as ever across the Atlantic. In fact, American management consultants are finding a big new demand for their services in Western Europe.

You can see the trend in the growing European business of such management consultants as Booz, Allen & Hamilton International, Ltd., George Fry & Associates, McKinsey & Co., Inc., Mead-Carney International, Lester B. Knight & Associates, Inc., H. B. Maynard and Co., Inc., and one or two others that already have an established business in Western Europe.

You can see it also in the decision of Bruce Payne & Associates to organize a world management corporation and to open offices next month in West Germany (Frankfurt) and Italy (Milan).

• **Spreading Out**—This is part of a larger push by American management consultants into the international field over the past few years—into Latin America especially but also into the Middle East and the Far East. Engineering consultants have long been in the international field. Now, other U.S. consultants are also handling important contracts for enterprises as diverse as foreign government oil companies such as Brazil's Petrobras and Italy's ENI and a blue-chip private oil company like Royal Dutch Shell in the Netherlands.

A lot of work is being done, too, for the foreign branches and affiliates of U.S. companies. For example, Bruce Payne & Associates works for Gillette in Boston, Mass., Sao Paulo, Brazil, and Buenos Aires, Argentina.

Several firms report that their foreign business is growing by 35% a year. All told, their combined business abroad must reach today into millions of dollars a year.

• **Home-Based**—McKinsey & Co. is

one American firm with a sizable foreign business that still operates abroad by sending consultants out from its U.S. offices. Sometimes these men stay abroad for a year or two. By using this system, McKinsey & Co. feels it can guarantee a foreign client exactly the same type of management knowhow as it offers in the U.S.

On the other hand, Booz, Allen & Hamilton, which operates in 15 countries, has a big office in Europe (Zurich, Switzerland) and plans to open one soon in Sao Paulo, Brazil. George Fry & Associates also has an office in Europe (Frankfurt), is opening an office soon in Iran, and may add a second European office, in Italy. Mead-Carney now does most of its work in Europe—and has clients like Philips in the Netherlands, Siemens in West Germany, Simca in France, and Fiat in Italy. These firms feel they can do a better job by having offices abroad.

When Bruce Payne & Associates gets its two European offices under way early next year, it will have about 100 men working abroad, equaling the size of the U.S. staff. As is the case with other firms having offices abroad, Payne's foreign staff will be partly American, partly foreign. And Payne's European offices plan to ask for the same fees as the firm gets here in the U.S.

I. Cause for Growth

The growing role of the American management consultant in Europe is a product of the Marshall Plan and of the productivity drive that has been carried on since then by the Organization for European Economic Cooperation.

The European Productivity Agency, which is part of OEEC in Paris, is working overtime to spread the gospel of advanced management techniques, thus paving the way for this latest U.S. business invasion of Europe. On a recent trip to Europe, the head of EPA's

Washington office discovered that there's intense interest among many European firms in what the U.S. management consultant has to offer.

EPA can't claim all the credit for this new interest in better management. Part of it is simply the result of the rapid industrial growth that Western Europe has experienced over the last two years. Many European firms, the middle-sized ones as well as the giants, have expanded at quite a clip. Growth, as one American consultant points out, brings management problems—and business for the management consultants.

• **New Problems Arise**—According to a consultant who has worked in France for 24 years, nearly all European firms that have suddenly moved into the 5,000-10,000-employee class need management counsel. Another American consultant with wide European experience says that many family firms across the Atlantic suddenly need, and now want, professional management.

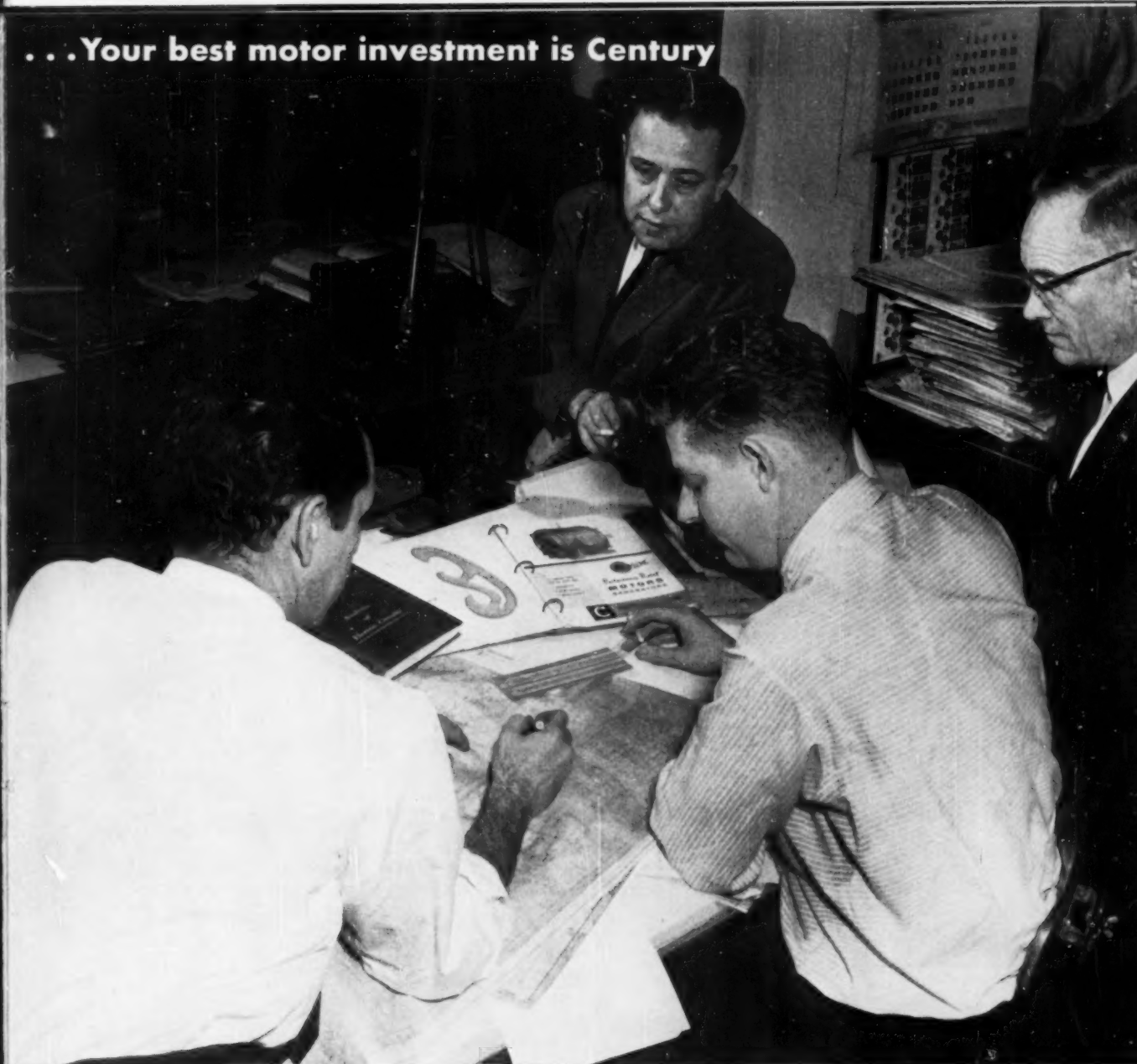
On top of this, there is the new stimulus arising from the development of the European Economic Community, with its common market of 165-million population, and the associated Free Trade Area. Together, these may give Europe a mass market of 250-million. To many a European business leader, this spells tougher, American-style competition in Europe. It also spells the need to prepare for it.

• **Their Own Advice**—The management consultant field, of course, is not the sole property of American firms. A number of British firms, some of them with close American links, are working both in Britain and on the Continent. France and the Netherlands each has its own association of management consultants, and West Germany has a government consulting service of sorts.

BUT BUSINESS WEEK correspondents in Europe unanimously report that the demand for top-flight consultant service from the U.S. is considerable, especially in West Germany and Italy. French industry, which is largely run by production engineers, seems less interested in improving company management techniques.

• **Most Critical**—Probably cost control, inventory control and organization planning are the services most in demand by European industry today. But advice on packaging, marketing, research, and office management is also in demand, and many parts of Europe provide virtually virgin territory for such service. In some cases, the American management consultant is needed to provide advice on how to crack the American market, which means keeping clear

...Your best motor investment is Century



Specify Century for top performance in motor-driven equipment

The performance and acceptance of equipment in the field can depend on the motor that drives it. And the design of motor-driven equipment is not complete until the motor is specified. This involves careful consideration of motor type and of motor manufacturer as well.

A familiar scene in the engineering departments of leading equipment manufacturers finds Century Application Engineers helping to determine the correct motor for the job. They are often called in during the design and development stage. Through their know-how and experience they help select the motors to match the performance of the equipment.

Century motors write their own record of reliability. Get all the facts on why Century is your best motor investment. Call your local Century man or Authorized Century Distributor.

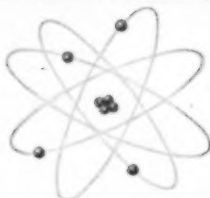
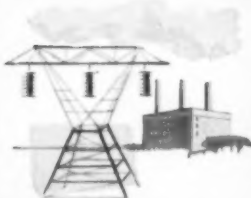
Century
MOTORS

CENTURY ELECTRIC COMPANY

St. Louis 3, Missouri • Offices and Stock Points in Principal Cities



**Stone & Webster
Engineering
Corporation can
help YOU!**



Stone & Webster Engineering Corporation has helped large and small companies in practically every country in the free world with specialized engineering services ranging from the development of a new welding technique to the design and construction of complete oil refineries.

The Corporation is experienced and equipped to help you with Design, Construction, Consulting Engineering, Reports, Appraisals and Examinations.

And as a completely integrated organization Stone & Webster Engineering Corporation can handle a single engineering phase or take full responsibility for the completion of major projects.

For further details write for our booklet on "How Stone & Webster Engineering Corporation Can Help You".



STONE & WEBSTER ENGINEERING CORPORATION
A SUBSIDIARY of STONE & WEBSTER, INC.

New York Boston Chicago Pittsburgh Houston San Francisco Los Angeles Seattle Toronto



in this respect with any European firm that competes with a domestic client.

Up to now, European manufacturers have shown the most interest in taking on American consultants. For example, about 80% of the work that Booz, Allen & Hamilton does in Europe is with manufacturing firms. In the U.S., about 50%-60% of this firm's work is with manufacturing.

II. A Morning Glory?

It is not all clover in Europe for the American consultant by a long shot. In fact, you will find people in the consulting field here who have their fingers crossed about the present enthusiasm for Europe.

The skeptics reason that the high fees charged by the top-bracket American firms—roughly \$100 to \$200 a day for the services of a qualified consultant—will finally kill the boom. They fear that either European firms, with much lower fees, or less meticulous U.S. firms, with low-quality services, may finally grab up the bulk of European business.

According to widespread reports, considerable damage has already been done to the standing of American management consultants by "carpetbaggers" in the immediate postwar years and by the methods used by at least one U.S. firm now in business in Europe.

- **Folities**—Then there are practical problems, sometimes with political overtones. In France, for example, one American consultant has had to depend for his work-permit on the good will of a Communist-controlled municipal authority. Sometimes fees can be collected only in local currencies—an obstacle to the transfer of profits.

There is also the resistance of conservative-minded European businessmen, who still constitute the majority despite the work done by the European Productivity Agency. One American consultant with experience in Europe draws a parallel between the attitude of the average European businessman today and that of the New England businessman of 25 years ago who was firmly convinced that no one could teach him anything.

- **But Good Contacts**—In the face of such problems, the U.S. management consultant does have the advantage of picking up considerable business from the European branches and affiliates of U.S. companies—often, but not always, a client of his firm back in the U.S. It is even possible to clinch a contract with a European company as a result of working for that company's affiliate in some other part of the world.

As Bruce Payne & Associates move into Europe, it expects that business clients in South America, such as Sweden's Facit, Inc., will help to establish connections in Europe. **END**

For what it's worth...

What is the meaning of depreciation?

from the CLIENTS' SERVICE BULLETIN
of The American Appraisal Company

"Depreciation" is a word of many definitions which often gives rise to arguments between people who have entirely different concepts of its meaning.

The accountant usually thinks of depreciation as a means of recovering the cost of a property item over its useful life. He may elect to recover the cost in equal annual installments or in diminishing amounts over the life of the assets. His chief objective is the measurement of manufacturing costs and period earnings.

The appraiser, seeking to measure value, views depreciation in an entirely different light. He starts with the cost of reproduction new and he estimates the depreciation which has accrued—taking into account physical deterioration, condition of maintenance, known obsolescence, and estimated future utility of the property. Under certain conditions, he must give careful consideration to economic factors such as location, technological improvements in the industry, and financial returns from the use of the property.

To weigh the desirability of a present piece of property, in comparison with new facilities that may be available, the appraiser will determine the cost of reproducing the present property, then reduce that figure by the accrued depreciation. Depreciation established for the determination of value is based on evidence at the time of the investigation. Rarely would a proper result be obtained by multiplying the age of the property by a theoretical annual rate of depreciation.

It should be clear from the above that there is no conflict between the accounting concept of depreciation and the appraisal concept. Their

objectives are different and naturally their approaches are different. The appraiser and the accountant may have the same destination, they may cover the same distance and may even arrive together, but they may not be at the same distance from the starting point at any given time.

★ ★ ★

American Appraisal Service furnishes up-to-date authoritative information about the existence, cost or current value of assets... and the adequacy of depreciation provisions. Values are established only after careful consideration of all factual data. An American Appraisal report represents more than half a century of experience in the field of valuation for purposes of insurance, accounting, taxes, property control and corporate financing.

The AMERICAN APPRAISAL

Company

SINCE 1896...LARGEST...MOST WIDELY USED

Home Office: Milwaukee, Wisconsin

Atlanta	Cincinnati	Kansas City	Philadelphia
Baltimore	Cleveland	Los Angeles	Pittsburgh
Boston	Dallas	New Orleans	St. Louis
Buffalo	Detroit	New York	San Francisco
Chicago			Washington

Affiliated: Canadian Appraisal Company, Ltd.
Montreal and Toronto

The American Appraisal Company
Dept. BW, 525 E. Michigan St.
Milwaukee 1, Wis.

Without obligating me, send me your
Bulletin No. 501, "Depreciation in Our
Present Economy."

Name

Firm

Position or Title

Address

City.....State.....

Hot Water

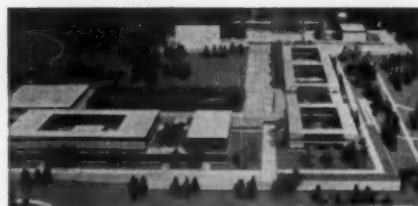
One of the three
C-E LaMont
Hot Water Boilers
being installed at
Forbes Air Base,
Topeka, Kansas.

TODAY'S NEW IDEA IN BIG-SPACE HEATING

Maybe hot-water heating doesn't sound like a new development to you. But it may be news to you that water at very high temperatures — up to 470° F and 500 pounds pressure — is coming to the fore as an advantageous method of heating large areas.

A big factor in bringing this trend about is the C-E LaMont Controlled Circulation Hot Water Boiler. Using the same principle applied by C-E in many of the country's largest utility boilers, this new boiler provides a degree of temperature control that makes it the most attractive method of heating in many cases. Examples of highly successful applications are industrial plants, large institutions, air bases and other military installations.

There are many cases, of course, where steam may still be the best choice. But here is an important point: whichever may be best for you, C-E, with its complete line of boilers of all types, can supply the equipment best suited to your particular situation. And, Combustion's wide experience is available to you and your consultants in finding the right answer. For details on C-E high-temperature water boilers, write for Catalog HCC-2.



Model of the country's newest service school, the U. S. Air Force Academy at Colorado Springs, where five C-E Hot Water Boilers will serve living, academic and service areas. Recognition of this system's advantages is shown by the fact that this same type of equipment is in service or on order for such Air Force Bases as Dover, Portsmouth, Forbes and McGuire... for industrial plants like Convair Astronautics Div. of General Dynamics Co., The Cross Co., Erie Mining Co. and Marquardt Aircraft Co. . . and for such institutions as the A. E. Smith High School in Riverview, Mich.

COMBUSTION ENGINEERING

Combustion Engineering Building
200 Madison Avenue, New York 16, N. Y.

B-991



*ALL TYPES OF STEAM GENERATING, FUEL BURNING AND RELATED EQUIPMENT; NUCLEAR REACTORS; PAPER MILL EQUIPMENT; PULVERIZERS; FLASH DRYING SYSTEMS; PRESSURE VESSELS; SOIL PIPE

In Business Abroad

• • •

Louisiana's Rep. Boggs Leads Fight

In Congress for Administration's Trade Policy

Rep. Hale Boggs, a Louisiana Democrat, has emerged as the Congressional manager for the Administration's liberal trade program. Boggs (picture), a 43-year-old political veteran from New Orleans, is chairman of the



House foreign trade policy subcommittee that has just concluded hearings on the pros and cons of various controversial phases of U.S. trade policy. Now the Boggs subcommittee is set to issue a report that will back the Administration's program to the hilt.

Meanwhile, various liberal trade and protectionist forces outside Congress are preparing

for the upcoming battle. The Committee for a National Trade Policy, which backs the Administration, is stepping up its activities throughout the country. So is the Nation-wide Committee of Industry, Agriculture, and Labor on Import-Export Policy, which is rapidly gaining strength.

• • •

Japanese Oil Company Ups the Ante, Saudi Arabia to Get 56% of Profits

Another crack in the traditional formula for a 50-50 division of royalties between oil companies and the foreign countries in which they operate showed up last week when the Japanese Petroleum Trading Co. signed a long-rumored oil deal with Saudi Arabia.

Under the agreement, Saudi Arabia will get 56% of the profits from oil produced by the Japanese company. The company will pay Saudi Arabia \$3-million yearly until its new concession is operating on a profitable basis.

It's almost sure that the Japanese company, now negotiating for a concession in Kuwait, will sign a similar 56-44 deal there.

• • •

Mexico City Battens the Hatches For Drought-Caused Power Famine

Mexico City is facing another threat of a critical power shortage for lack of rain during the May-to-October wet season.

The city has had power rationing at least three times in recent years—in 1944, 1947, and 1950. Because of the rapid growth of population and industry, an acute power shortage this time would do greater damage now.

Gen. William H. Draper, Jr., board chairman of Mexican Light & Power Co., which supplies power to the Mexico City area, is preparing for the shortage by all sorts of strategy, including:

- Asking companies to make ready their private generators.
- Stepping up Mexlight's expansion program to boost steam generating capacity by 95,900 kw.

• • •

BOAC Puts Bristol Britannia 312 On Atlantic Run in Bid for Prestige

This week the British aircraft industry opened a new bid for prestige when British Overseas Airways Corp. put into service the Bristol Britannia 312—a long-range, 400-mph. turboprop—on the lucrative North Atlantic run.

Two years ago the British aircraft industry suffered a bad setback when the De Havilland Comet—the jet that the industry hoped to capitalize on—was pulled out of service after two crashes. Even today, with later Comet models developed, the plane is still being used only by the British and Canadian air forces.

The more recently developed Bristol Britannia has been having its share of troubles, too. The plane could not complete its commercial test in time to carry the British royal family to North America. Then, a few weeks ago, a Britannia 312 crashed during a test flight in Britain—though the crash may have had nothing to do with any basic faults in the design.

On top of this, the Britannia is now going into service with an unsolved technical problem: engine icing. It will fly on commercial routes under certain temperature and altitude restrictions. Only one U.S. airline—North-east—has an order for Britannias, and it's possible the order may be withdrawn.

• • •

Brazil's Alcohol-Swiggling Autos Are Due for an Even Bigger Shot

How much alcohol can a car take? That's a major question in Brazil where the gasoline you buy in filling stations has an added alcoholic kick—in actual fact, surplus sugar alcohol mixed in.

Since prewar days, Brazilian cars and trucks have run in this unique mixture, which in a place like Recife—close by the sugar industry—can go as high as 35% alcohol to 65% gasoline. The original reasoning behind this mixing was uniquely Brazilian: Save on oil imports and keep the large, government-subsidized sugar industry in the black by using sugar alcohol in gas.

But with a giant sugar crop looming up—43-million bags expected next year against 37.5-million this year—gas station attendants are saying: "It will really make cars drunk." Yet no one has proven that alcohol is bad—for cars. In the interior of Brazil, some trucks and cars right now are running on pure alcohol.

NEW PRODUCTS



A Bus That Soothes the Psyche ...



... And Offers a Playroom, Too

The spang new experimental bus in the upper picture is the latest entry in the intercity field. Mack Truck made it for Greyhound Corp., which will now test it on long distance runs to see how it stacks up against the General Motors Scenicruisers now in use.

Greyhound is already raving about the new bus as a revolutionary advance in styling and comfort. Among the points that especially inspire the promotion department are:

- A flat floor replacing the old well-type aisle so that passengers no longer have to step up to their seats.

- A rear recreation area (lower picture) with a removable card table and revolving seats so that passengers can face in any direction.

- A lavatory, featuring stainless steel fixtures, outlets for electric shavers, and a mirrored wall. The lavatory has a practical advantage; it helps cut down the number of stops the bus must make.

- Foam rubber reclining seats, with adjustable head rests and airline-type fixtures for service trays.

The Mack Truck tub-thumpers find even richer, more spiritual rewards. The passengers, they report, will bask in a sense of security nourished by big shiny bumpers and fin-type tail lights. Passenger euphoria will be further enhanced by dual headlights and extremely good visibility for the driver of the rolling castle.

On a more mundane plane, the bus

is 40 ft. long, 8 ft. wide, 11 ft. high and seats 39 passengers. It's powered by a 255 hp. turbo-charged Thermodyne diesel and rides on Mack's new air suspension system. Although the bus was designed primarily for Greyhound, Mack will make it available to any bus line with long distance needs.

NEW PRODUCTS BRIEFS

Ultrasonic tooth cleaning is made possible by a new dentist's instrument developed by Cavitron Equipment Corp., Long Island City, N. Y. The tip of the instrument is held against the teeth as it vibrates $1\frac{1}{2}$ thousandths of an inch, 26,000 times a second. This oscillation loosens tartar, nicotine, and other stains, and a thin stream of lukewarm water washes the deposits off the teeth.

A proofreading rule for persons working with printed or typed words has a roller down the center to help keep it parallel as it moves from line to line down the page. The manufacturer, Regan Mfg. Co., San Bruno, Calif., says that the rule makes it easier to center titles, keep printed lines parallel, and find typographical errors. It costs \$1.50.

Vinyl swimming pool linings with adhesive facing that sticks to brick is being manufactured by Fasson Products, Painesville, Ohio. Advantages of the lining are complete water tightness and a durable non-scratching surface. The liner also can be used in pools constructed of wood or composition materials.

A heating mat for floors that's waterproof, shockproof, and sanitary is being made by Products Engineering & Mfg. Corp., Pennndel, Pa. It's designed to provide a warm floor surface in shacks for parking lot attendants, tool shops with cement floors, garages where mechanics have to work under cars. The mat can be heated to 135F with regular house current. It costs \$14.95.

A radio telescope amplifier that will extend the range of radio telescopes 10 times has been developed by the Gordon McKay Laboratory of Applied Science at Harvard University. Man may now be able to hear radiation from hydrogen clouds in galaxies beyond the range of present instruments and also to detect signals only 1/1000th as strong as now possible. It was developed under a contract with the Army, Navy, and Air Force.



How would you like 5 months' extra rent from your next office building?

WE'RE ALL FAMILIAR with the beautiful new curtain wall office buildings that are sprouting all over the nation. Stainless Steel wall panels are the ultimate in maintenance-free design; and porcelain-enameled steel panels have no rival in their combination of time-tested, rich, durable colors and low cost. Then too, the thin steel panels permit much greater rentable floor area.

But never forget the *earlier occupancy* advantages of steel wall construction. In one 870,000-sq.-ft.-floor-area group of buildings, the builder estimated that it would take six months to cover the exterior with traditional materials—but based on erection speeds actually obtained on the job with Stainless Steel covered panels the walls could have been completed in three weeks. In this case, six months of rent (at \$5.00 per sq. ft.) came to \$2,175,000. Rent for the 21 days amounted to \$250,000. Potential savings due to earlier occupancy add up to a whopping \$1,925,000.

This, of course, was *in addition* to the savings in structural steel (steel walls are lighter, so they reduce the dead weight of the building) and the additional rental every year due to increased floor area.

This is still only part of the story. Why not send the coupon and learn more about this imaginative new building method?

United States Steel
525 William Penn Place, Room 2801
Pittsburgh 30, Pennsylvania

Send me your free "Walls of Steel" booklet.

Name

Company

Address

City Zone State

USS STEELS FOR ARCHITECTURAL DESIGN

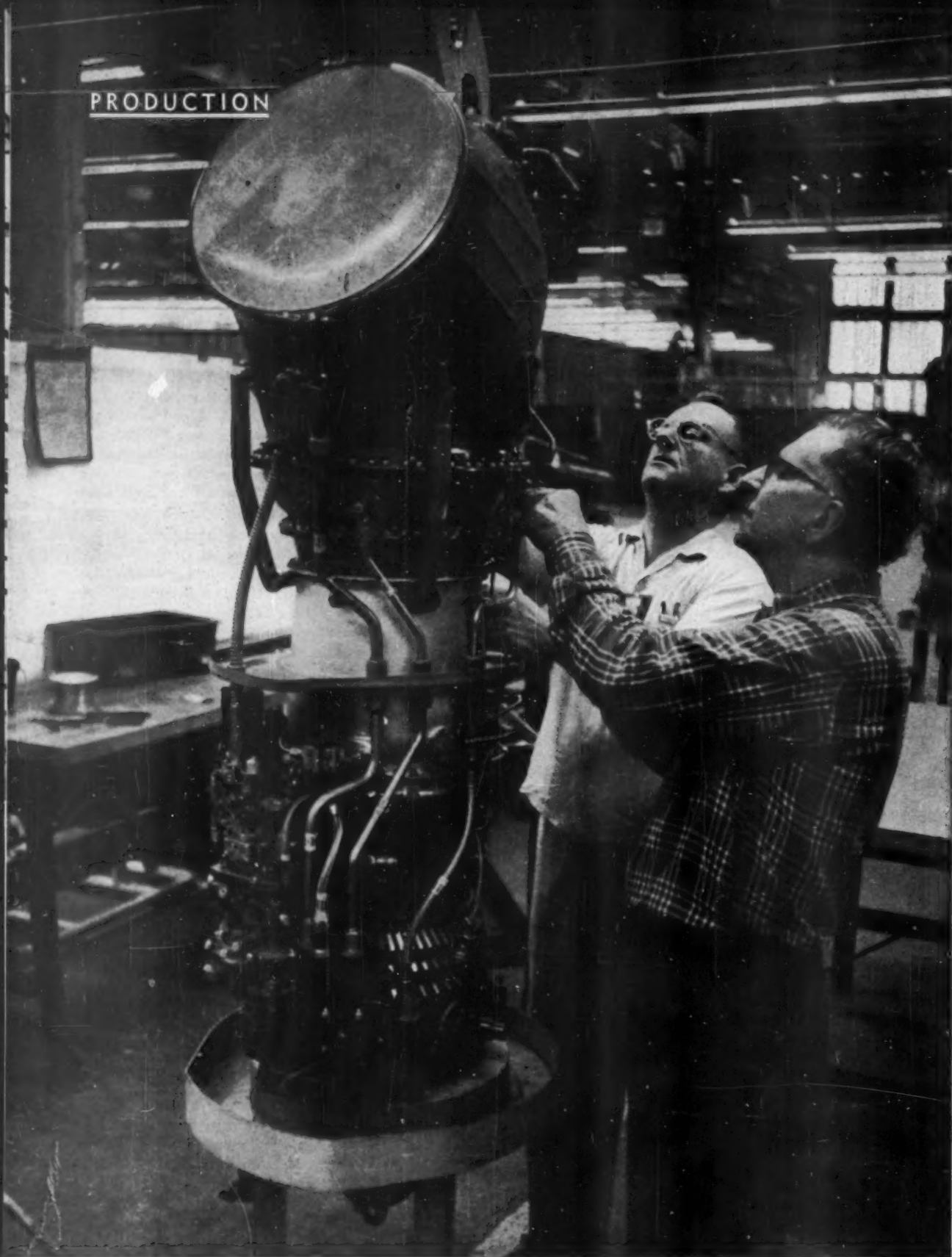
USS STAINLESS STEEL • USS STRUCTURAL STEEL
USS VITRENAMEL SHEETS • USS WINDOW SECTIONS

USS and Vitrenamel are registered trademarks of United States Steel Corporation.

UNITED STATES STEEL



PRODUCTION



SMALL JET engine such as GE's 1,024-hp., lightweight T-58 when powering a helicopter permits it to carry twice as much payload.

Jets in Economy-Size Packages

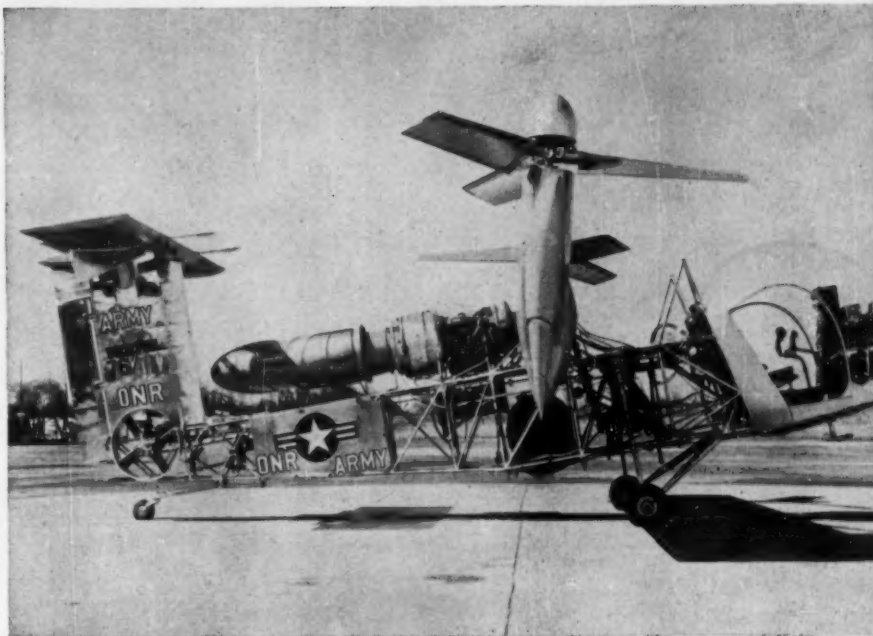
With vastly more thrust in proportion to weight than their big brothers, small jet engines may revolutionize aviation.

Not long ago, it would have been outlandish to suggest that a flying crane might deliver a prefabricated house intact on your doorstep—or lay a pipeline across impassable wasteland. But such futuristic notions are no longer preposterous, thanks to tidy little jet engines of the sort pictured at left.

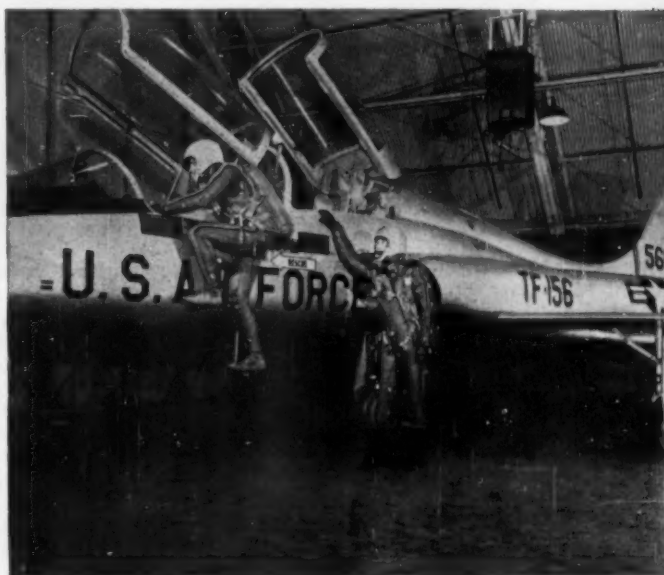
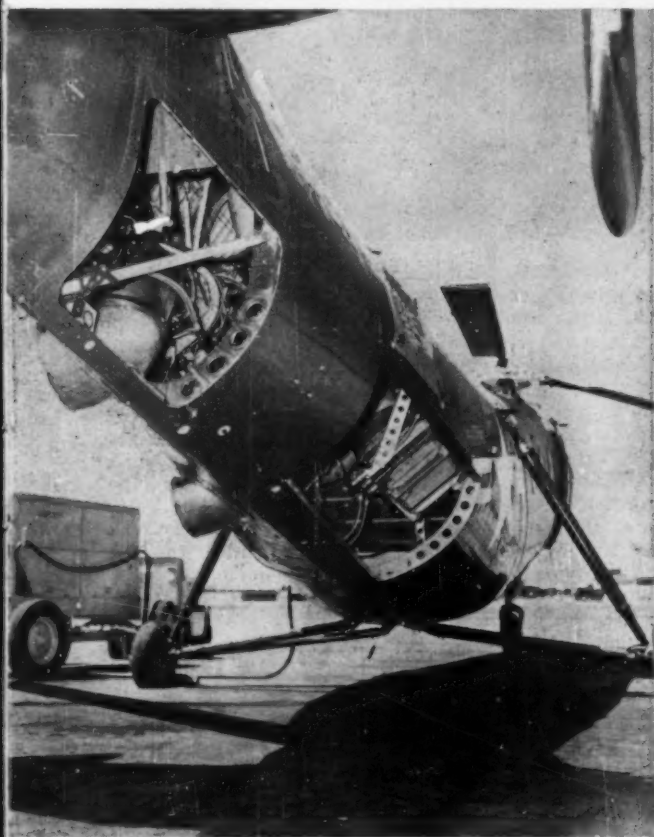
The new, smaller jets, developed by several manufacturers, boast up to five times more lifting power than comparable piston engines. They may transform the dream of giant passenger-carrying helicopters into reality. And they make all kinds of other vertical-rising and tilt-wing aircraft more practical.

The compact, new small engines fall into two principal classes:

- Turbojet engines, with 2,000 lb. to 3,000 lb. of thrust—in proportion to their size and weight, almost 50% more than is exerted by the much-



STRAIGHT UP: That's the take-off route for a propjet Vertol 76, driven by a Lycoming T-53 engine. Other VTOL planes may use even newer high-thrust turbojet power plants.



TWIN-JET TRAINER, the Northrop T-38, will do the work of a much heavier plane, thanks to the light new engines.

HELICOPTERS use gas turbine engines in sets of two or three giving them more reliability, speed, and lifting power than the breed has ever enjoyed before.



TINY BLADES of rotor on jet compressor demand craftsmanship, add to engine's cost.



DURING TEST of a new, small jet engine, technicians keep tabs on performance as the engine is run up by watching instrument panel linked to test cell.



GE's T-58s are assembled on miniature production line. This workman is busy on the engine's compressor stage.

ballyhooed 10,000-lb. and 15,000-lb. jet engines now powering advanced Air Force and Navy bombers and fighters.

- Rotor-driving jet engines, now beginning to replace piston engines in helicopters—and described as the biggest advance in whirlybirds since Pierre Brequet first proved they would work, back in 1907.

- **Applications**—The future of these new jet power packages is linked to three types of potential aircraft uses:

- Helicopters.
- Commercial and military fixed-wing planes of small to medium size.
- Flying cranes, vertical take-off (VTOL) and short take-off (STOL) craft, and other now-freakish flying machines that may someday be as everyday as the DC-3.

In the first two categories alone, General Electric—maker of two of the new high-thrust jets—envisions a market of several hundred million dollars a year for the small engines. And if

they turn out to be the breakthrough that makes some of the more exotic aircraft possible, the figures in the market guesses grow more astronomical.

- **Success Formula**—A simple formula is behind the high efficiency that forms the most signal virtue of the small jet engines. It has been discovered that weight increases faster than thrust: as engines increase in size and power, the thrust increases in proportion to the square of the engine's diameter, whereas weight increases roughly as the cube. So on a pound-for-pound basis, these modest-size engines are more potent than the big jets, such as GE's J-79 or Pratt & Whitney's J-75.

Between the newness of the small jets and the security regulations that cloak many of the details about them, not much is known of the current status or performance of some members of the family. GE's T-58 and Avco Mfg. Corp.'s Lycoming T-53 made their flight debuts within the last year,

but the progress of the new high-thrust turbojets—GE's J-85 and Fairchild Engine & Airplane Corp.'s J-83—is still classified, because they will also be used to power missiles.

Besides these four engines, two other small U.S. jet power plants are on the market—Fairchild's J-44 and Continental Aviation & Engineering Corp.'s J-69, an American version of the French Turbomeca Marbore. Both these engines are turbojets in the 1,000-lb. thrust class. In addition, Republic Aviation Corp. is selling in the U.S. the French Alouette II helicopter, which is powered by a 424-hp. French-built Turbomeca Artouste. Later this engine may be produced by Continental under license. In the midjet engine class, Solar Aircraft is in the running with a 55-hp., 51-lb. engine under development for one-man helicopters and flying platforms.

Whatever their application, these new, small engines work on the same

how different will you dare to be...



ALLEGHENY LUDLUM

PIONEERING on the Horizons of Steel

All of these products represent big industries: some old, some very new—but all growing, changing and bright with promise. Someone dared to be different.

Why? Because people wanted to do things differently and better . . . travel, live, build, talk, see, listen, protect, defend. And because the special alloy steels and other new metals that could trigger such advances were *available*. That was the big essential, because you can design only as far as available materials will let you go.

Many of these special materials are Allegheny Ludlum

pioneering developments: stainless and super high-temperature steels; grain-oriented silicon steels and special electrical alloys; titanium, zirconium, carbides and other special-property metals.

It is our continuing job to research and develop such materials. *And much more important:* make them available to you in the shapes, forms, sizes and volume you require, high in quality and uniform in properties. Let us work with you.

***Allegheny Ludlum Steel Corporation, Oliver Building,
Pittsburgh 22, Pennsylvania.***



Pretty colors not welcome!

INDUSTRY makes many products that must be crystal-clear—without a trace of color or contaminants. A good example is the liquid sugar being poured above. Processors have found that the most efficient and economical way to remove unwanted color from most liquids is to circulate them through a bed of Pittsburgh granular activated carbon—small coal-derived particles that look like tiny, hard black sponges. They're so porous that a single pound contains 125 acres of adsorbent surface!

These amazing granules were developed by Pittsburgh Coke & Chemical. In addition to color removal, they're widely used today for pharmaceutical purification, solvent recovery, air and water purification and dozens of other vital adsorption processes. They're another outstanding example of Pittsburgh Coke's unique ability to create better, more useful products from coal . . . and to guard their quality and purity through every step of production, from coal to finished product.



principle. Basically jets, they inhale air, compress it in a turbine, then add fuel and burn the mixture in a combustion chamber. In a helicopter or turboprop plane, the resulting jet stream is harnessed to turn a rotor or propeller; in a jet plane, the thrust of this hot air drives the craft directly.

I. Helicopter Uses

The potential of these new engines is already evident from what's happened to them with helicopters. The new turbine whirlybird power plants—GE's T-58 and Lycoming's T-53—are now available, and Bell Aircraft Corp. has built the first production helicopter designed around a gas turbine engine instead of a piston engine, the Army H-40.

The virtues of the small jets show up plainly in only two facts about the H-40, which is powered by one T-53: It weighs only about 65% as much as a comparable piston-engined whirlybird, and yet it can carry twice the payload.

Vertol Aircraft Corp. tells a similar tale. It replaced a piston engine in its 22-place Army H-21-D helicopter with two T-58s—and by so doing upped the craft's carry capacity by 40%, its speed by 50 mph., and its ceiling by about 2,000 ft.

- **Added Attraction**—One of the special blandishments of switching to two turbine engines in a helicopter is the reliability this contributes, especially in flights during bad weather. Turbine engines are quieter, too.

More important, though, are the maintenance economies expected from using the T-53 and T-58 in whirlybirds, now disturbingly expensive to keep in operation. In this department, their advantages include these:

- Because a turbine is so much smoother than a piston engine, wear and tear will be reduced.

- The rotor-driving turbine works like an auto's fluid drive, and this eliminates the clutch—which can be a major source of trouble.

- Despite their ruggedness, the turbine engines are light and easy to take apart. In the T-53, for example, the whole power assembly unit and the combustor section can both be removed quickly without disturbing any of the rotating parts in the gas compression section.

- **Comparing the Two**—Of the two turbine engines, GE's T-58, rated at 1,024 hp., is the lighter at 325 lb. Lycoming's T-53 is slightly smaller and heavier at 825 hp. and 460 lb. But GE's engine is a bit more complex, and in some uses this might outweigh the advantage of its added power.

GE first tried its T-58 in a Sikorsky S-58 helicopter. Besides the Vertol

H-21-D, it's now at work in Kaman Aircraft's utility helicopter, the HU2K-7, and it's due for use in several foreign whirlybirds. The T-53 powers a commercial version of the Army's 22-place Vertol helicopter and Kaman's H-43-B Air Force crash rescue helicopter, as well as the Bell H-40.

Neither manufacturer is anxious to talk prices on these engines, which are just now going into initial production. But Lycoming admits its first engines probably cost well over \$100,000—and that even after the first order for 100-plus engines has been completed, the price will be about \$65,000 each. Eventually, however, the company thinks the economies of full-scale production will bring the tab down to about \$30 per hp. This is still \$10 per hp. more than piston engines cost, but since the gas turbines make it possible to carry so much more payload, it's worth it.

As for fuel consumption, the best a piston engine can do is about 0.45 lb. per hp. per hour. With a gas turbine engine, specific fuel consumption runs about 0.65 lb. per hp. per hour. But in that hour, a turbine-powered whirlybird can cover a third more ground and carry almost twice the load—so again the difference is insignificant.

- **Bigger and Better**—For the future, both GE and Lycoming are at work on larger engines. GE's T-64 will be offered as both a helicopter engine and a turboprop in the 2,000-hp. to 3,000-hp. class. Lycoming plans to upgrade its present T-53's rating to 1,050 hp. and add a 1,600-hp. model, the T-55.

II. Fixed-Wing Planes

The new high-thrust turbojets—Fairchild's J-83 and GE's J-85—are still secret, but it's already clear that they will bring radical change to conventional, fixed-wing aircraft. The thrust to weight ratio of the new models is expected to be 8 to 1, perhaps even 10 to 1—compared with a ratio of a little better than 3 to 1 on today's big jet engines. The best that can be expected from the bigger engines is thought to be about 6.5 to 1. Because the thrust ratio of the small engines is so much greater, they make it possible to decrease the over-all engine weight—and this reduces the over-all weight of the plane. In an 8-passenger utility transport, for instance, the weight can be cut from 45,000 lb. to 26,000 lb. With airframe weight costing about \$35 per lb., this is a sizable saving.

What these facts mean to engineers is that, in some cases, it may be more sensible to use four small engines instead of two bigger ones—or even sets of four or more small power plants packaged into pods—in order to get the most push for the least weight.

However, the small-engine boosters

don't expect to relegate the big J-75 and J-79 jets to retirement. These engines, with 10,000 lb. to 15,000 lb. of thrust, will be needed to power long-range, heavily armored fighters and bombers and the big 150-passenger jets now rolling off production lines. The smaller, high-thrust models might be used in batches to propel medium-sized planes, but it's a tricky matter to control groups of engines. And the weight of the necessary controls begins to mount alarmingly—so much so that it can nullify the original weight saving.

- **Place in the Sun**—The brightest future for the smaller engines seems to lie in military support aircraft, such as command planes, trainers, observation planes, and liaison craft.

For example, Northrop Aircraft, Inc., intends to power its new T-38 jet trainer either with twin J-83's or J-85's. This will give it a 10,000-lb. trainer with all the speed, altitude, and endurance of today's 20,000-lb. combat aircraft.

Lockheed Aircraft Corp. is currently powering its much-touted 10-passenger, 560-mph. Jet Star transport with two Curtiss-Wright TJ-37 engines (with 4,850 lb. of thrust). But Lockheed says that when the J-83 or J-85 becomes available, it will offer a four-engine version of the plane equipped with the new high-thrust power packages.

North American Aviation is bringing along a smaller twin-jet military utility plane that will use J-83's or J-85's.

Fairchild's J-44, which has already proved itself in target drones and Navy missiles, is being mounted on the Air Force's Fairchild C-123 cargo carrier for take-off assistance.

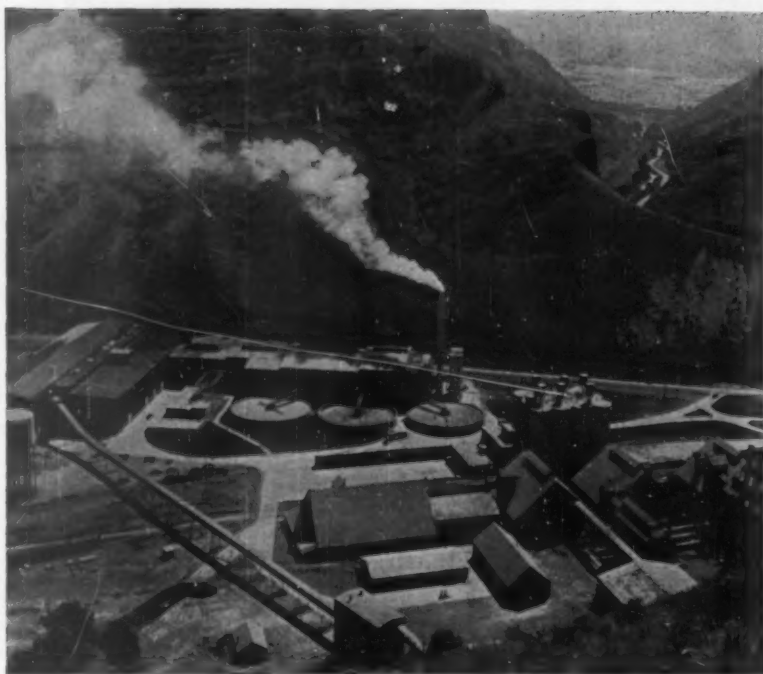
One of the engines widely used in helicopters—the Lycoming T-53—shows up again as a turboprop in the plans for the Grumman AO-1, a high-speed, twin-engine observation plane for both the Army and the Navy.

III. Exotic Uses

The most spectacular of all applications for the new small jets is in the vertical take-off and short take-off aircraft. Some of these are now beginning to emerge from the drawing boards; others are already in first stage flying prototype form.

Turboprop engines power test vehicles such as Vertol Aircraft's tilt-wing and Ryan Aeronautical's Vertiplane. Hiller Helicopters' proposed tilt-wing will depend on even bigger turboprops.

But many engineers think that to be of practical military or commercial use, these VTOL's and STOL's will need engines with thrust to weight ratios of 8 to 1 or even 10 to 1. That means turbojet power plants like the J-83 and J-85 may be needed to get them off the ground. **END**



Ideal's plant at Devil's Slide, Utah

To keep pace with the growth of our country, in the past 10 years since 1947 the production of Ideal Cement has been more than tripled, from 7 million to over 24 million barrels per year.

For more than 50 years, Ideal stock (and that of its predecessor companies) has been on the Over-the-Counter market. Listing has now been effected on the New York Stock Exchange and the Pacific Coast Stock Exchange.



Cement Company

DENVER, COLORADO

15 Plants and 3 Terminals
Serving Some of the Most Rapidly
Growing Areas of the Nation

Muffler for a Jet

Noise husher that Boeing will use tones down roar by breaking up jet stream into many smaller squirts.

How to hush the banshee wail and express-train roar of a jet-powered aircraft is a problem that has aircraft researchers scurrying frantically to meet a fast-advancing deadline. Before production aircraft start coming off the line, the labs must come up with a practical device that will shush a jet enough to meet the strict noise-limit rules of metropolitan airports. Otherwise, the manufacturers will be turning out fine new aircraft that they can't bring near the passengers.

Engine and airframe manufacturers alike have been laboring over the tricky noise problem—probably none harder than Boeing Airplane Co., which has its first production jet scheduled for first flights late this month.

• **Boeing's Entry**—But not until last week did Boeing come up with a final design for a noise suppressor. The company picked what it considers the best yet—a weird-looking cluster of tubes hung on the rear of the engine pods.

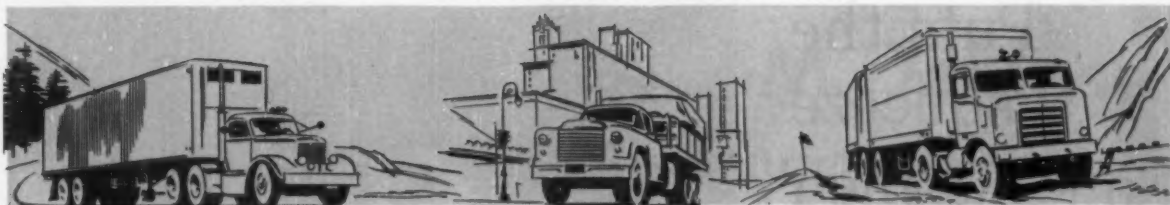
In addition to the suppressor, the Boeing ships will also sport a device to reverse thrust on landing in order to provide aerodynamic braking. Both will be on the first production model 707, now to start its year-long series of Civil Aeronautics Administration tests early in 1958.

The company has already tested the new suppressor on its prototype transport, which made four cross-country flights to establish sound levels at various altitudes and locations around airports. These flights also yielded data on the penalty paid for a quieter jet. Suppressors reduce the efficiency of jets, because they create back pressure.

• **What It Does**—Boeing's noise suppressor not only muffles the jet's racket but changes its character. It acts by breaking up the mainstream of hot gases from the tailpipe into a number of smaller squirts. This eliminates a part of the violent tearing noise that is the loudest part of a turbojet's howl.

• **Hope**—Boeing says it tested over 500 different suppressor types in the laboratory before it settled on nine for full-scale testing that led to choice of the present device.

The company is confident the suppressor will help the 707 over the biggest hurdle in its path so far—the Port of New York Authority's ban on noisy jets at all metropolitan airports, including the all-important New York International Airport at Idlewild. **END**



Whether you haul over the road—in city traffic—or in hard-to-get-to places, the Allison Fully Automatic Truck Transmission



will enable you to haul more payload—faster—safer—and at lower cost than ever before

Only the Allison *fully automatic* truck transmission gives you *all* these cost saving features:

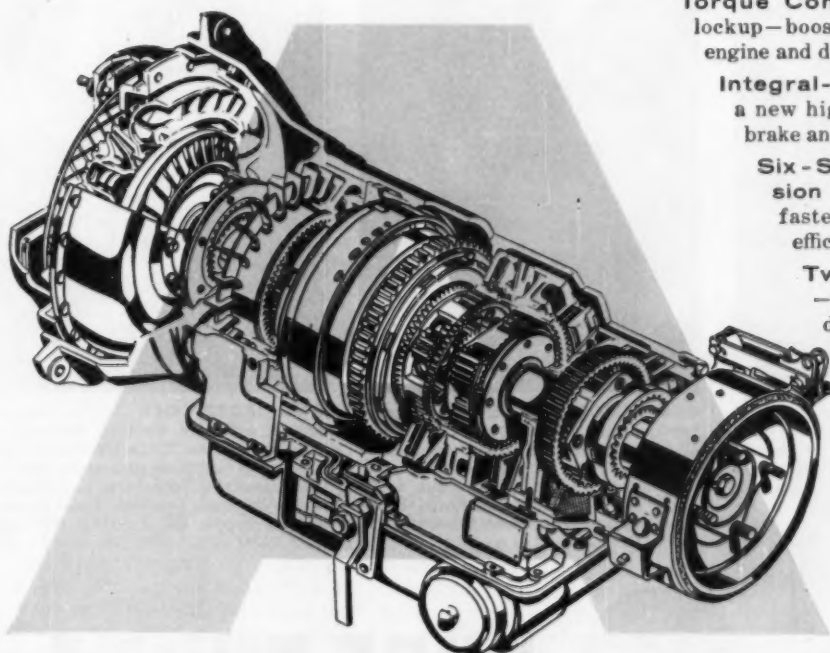
Torque Converter featuring direct-drive lockup—boosts operating efficiency—slashes engine and drive-line maintenance.

Integral-Hydraulic Retarder—brings a new high in road safety—a new low in brake and tire maintenance.

Six-Speed Automatic Transmission featuring Triple-Drive Range for faster trip time—increased driver efficiency.

Two Power Take-Off Openings—with exclusive torque converter drive for more power and faster operation of auxiliary equipment.

Allison Automatic Transmissions are currently sold by leading truck manufacturers under various trade names. Find out how an Allison fully automatic truck transmission can repay its modest cost many times over in *your* trucking operation. See your truck dealer or write:



ALLISON DIVISION OF GENERAL MOTORS, Indianapolis 6, Indiana

Allison

TORQMATIC

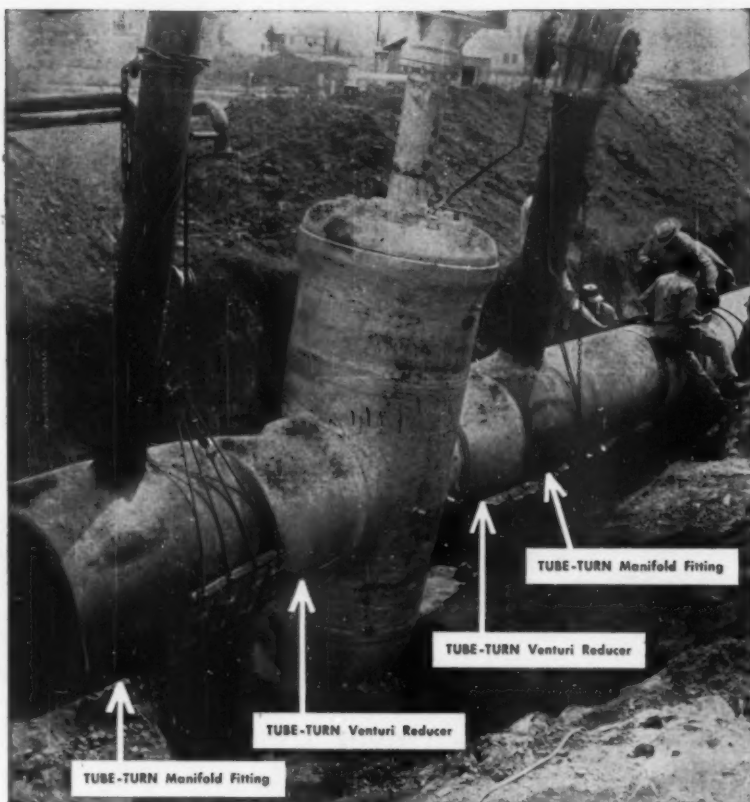
TORQMATIC DRIVES

Puts the squeeze on "big inch" costs

This photo shows a gate valve setting on the 36-inch line of Transcontinental Gas Pipe Line Corporation in North Carolina. And it shows two important contributions of Tube Turns to the job of carrying gas cross-country via "big inch" lines. The TUBE-TURN® Manifold Fittings afford optimum strength for "bleed-off" connections such as shown. The TUBE-TURN Venturi Reducers taper the 36-inch line down to permit use of a 30-inch valve, effecting big savings in valve cost.

These are typical of many "specials" in Tube Turns' line—outside its more than 12,000 standard products—to provide the world's most complete line of welding fittings and flanges to meet your needs exactly.

®TUBE-TURN® and "tt" Reg. U. S. Pat. Off.



"HOT TAP" connections are now made into gas lines under pressure. TUBE-TURN Full Encirclement Saddles provide safe connection to the pipe. The one above is being installed in an 8-inch line of Manufacturers Light & Heat Company at Wellsville, Ohio.



COMPRESSOR BOTTLES are now being fabricated as shown. This one, 18 feet long, 30-inch diameter, with 1-inch wall is made from these TUBE-TURN products: A manifold fitting, a cap, an outlet cap, a 90° elbow and a welding neck flange. Fabricated by Dravo Corporation, Marietta, Ohio.



ONE ORDER DOES IT! You can get prompt service in welding fittings from your nearby Tube Turns' Distributor. One order takes care of all your needs. And, he makes available Tube Turns engineering service on piping problems. Photo courtesy Lansing Supply Co., Lansing, Michigan.

The Leading Manufacturer of
Welding Fittings and Flanges



TUBE TURNS

A DIVISION OF NATIONAL CYLINDER GAS COMPANY

Louisville 1, Kentucky

RESEARCH

Hard Road to an ICBM Defense

Finding a way to stop an ICBM attack may be key to supremacy in Space Age—but the U. S. has a long road to go to success.

The Age of Space is bringing startling changes in the world's arsenal of weapons—and in the early rounds of the contest to develop the long-range ballistic missile, Russia has unquestionably scored a stunning victory.

But military history is a story of defensive as well as offensive weapons—and that, as any rocket expert well knows, may be the key to supremacy in the Space Age. The balance of power will probably rest, not on the long-range missile itself, but with the country that first succeeds in developing a means of defense against the 5,000-mile ICBM and its shorter-range sister, the 1,500-mile IRBM.

How close, or how far, Russia, may be from such an "anti-missile missile" is a matter shrouded in totalitarian secrecy (BW—Nov.16'57,p41). In the U.S., too, anti-missile research is so closely linked to military and defense problems that the security blankets are heavy—but enough shows through to permit an appraisal of what the U.S. is doing, and where it stands. What is visible indicates that the U.S. has a long road ahead if it's to get there first with a defensive punch.

• **Anti-Aircraft**—As things stand today, the U.S. has nothing yet in its arsenal of missiles (BW—Oct.12'57,p42) that could destroy or deflect an inter-continental ballistic missile. Neither—as far as we know—do the Russians.

The U.S. does have a varied arsenal of defensive missiles in being and under development—but these are primarily anti-aircraft missiles; and the more advanced types that might fit into an anti-ICBM defense aren't yet in production. Here's the picture:

• A number of recently developed missiles, such as the air-breathing, 39-ft. Bomarc (picture, right), are reported to be extremely effective as anti-aircraft weapons, and are due to be installed soon at our defense bases from Maine to California. Designed as a pilotless interceptor, the Bomarc has a 300-mile range, a speed two and a half times the speed of sound, and a guidance-homing device that enables it to seek out its target with little help from the ground.

• Major U.S. cities are presently guarded by batteries of Nike-Ajax ground-to-air missiles. The Nike-Ajax has a range of about 20 miles, is vir-

tually useless to jets of Russian manufacture. So it's currently being replaced at defense installations by the 50-mile to 75-mile Nike-Hercules, which can be equipped with a nuclear warhead for increased effectiveness.

• Under development but not yet in production are two other aircraft interceptor missiles, the Nike-Zeus and the Wizard, each with a range of 100 miles to 200 miles. Both are reported stalled far behind schedule.

Though the Bomarc and Nike-Hercules have an important place in anti-aircraft defense, it's certain that neither would be of any use at all as a defense against an ICBM—an incredibly fast weapon zooming down on its target at something like 20 times the speed of sound. The only U.S. "hardware" yet conceived that will come anywhere near to filling the role of defender against the ICBM are the Nike-Zeus and the Wizard.

• **Odds**—But these are hardly in an advanced stage of development. And though missile scientists (BW—Oct.19'57,p66) are hopeful that the U.S. before long will catch up—or even pass—the Russians in production of both ICBMs and IRBMs, the odds on finding some adequate defense weapon against ICBM in the very near future are far from good.

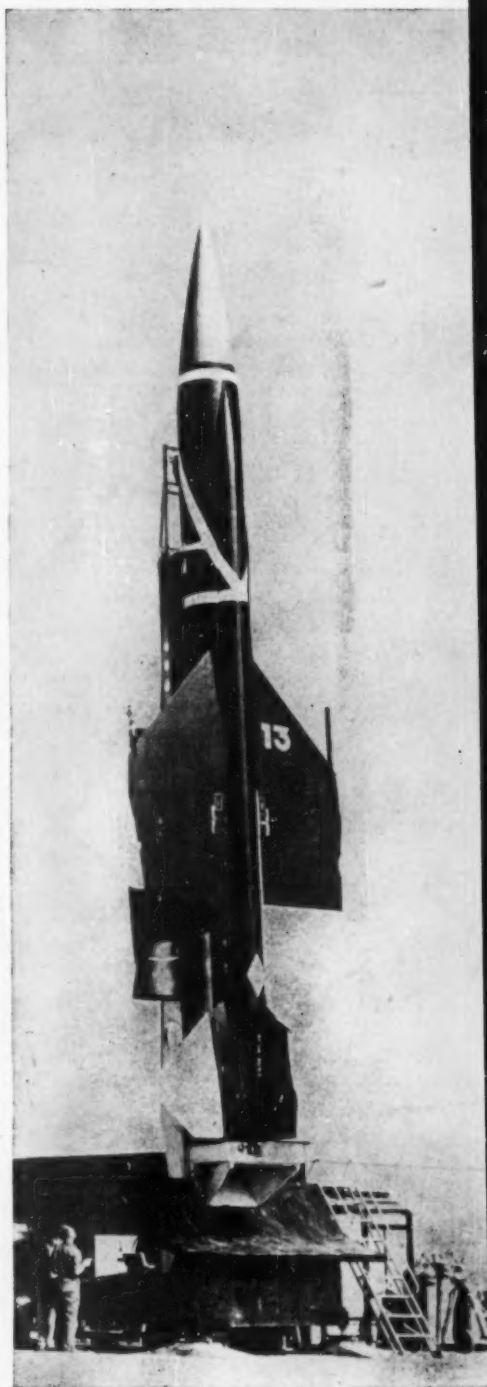
No responsible scientist thinks a defensive weapon will not be found. But the complexities involved in an anti-missile weapon system seem to rule out any easy—or quick—solution.

• **Difficult Task**—Take a look, for example, at the "enemy" that an anti-missile system must detect, identify, intercept, and destroy. An ICBM has a range of 5,000 miles, covers that distance in 30 minutes, soars 600 miles to 800 miles above the earth's surface, reaches a speed 20 times that of sound.

This sets up a pretty tough task for the defense system. It must:

• Detect the oncoming ICBM far enough away to be able to plot its course in time to put an interceptor device into operation. What a job this is you can see from the fact that an approaching ICBM would present toward its target a surface of about 0.25 square meters—but would have to be detected by radar when 1,000 to 3,000 miles away.

• Be able to identify the oncoming intruder positively as a missile, not a meteorite or a decoy. It's quite probable, missile men point out, that any Russian ICBM would be designed to release several light, simple decoys along with its warhead. These could be de-





BOMARC, the Air Force's air-breathing interceptor missile, can rout enemy planes—but will be useless against a long-range missile like an ICBM.

more
money
thanks to trucks!



Did you know? Strengthening foreign countries to withstand communism costs you and me and business some 3 billions yearly.

The taxes paid by the Trucking Industry in one year totals more than two-thirds of our entire foreign aid outlay.

prepared in the public interest by  FTO
Reo Division, The White Motor Company
in behalf of  ATA American Trucking Industry



Through this door
lies the best business
route to Canada

Canada offers you opportunity—boundless opportunity in trade and investment—but only when you know her markets.

That's where *The Bank of Nova Scotia* can be so helpful to you.

A partner in Canada's growth since 1832, the BNS—with nearly 500 branches throughout Canada—is well equipped to give you sound information and counsel.

Write for our *Monthly Review*, a regular report on various phases of Canadian business.

The BANK of NOVA SCOTIA
New York Agency: 37 Wall St. Chicago
Representatives: Board of Trade Bldg.
General Offices: 44 King St. W., Toronto,
Canada. London Offices: 24-26 Wal-
brook, E.C.4; 11 Waterloo Place, S.W.1
and correspondents wherever men trade.

"... best guess is that the total being spent on anti-missile research in the U.S. this year only adds up to a hundred million dollars . . ."

ANTI-MISSILES starts on p. 91

signed to provide a much better target for conventional tracking radar than the warhead itself—and the radar for any anti-missile system would have to show the difference.

- Be able to continue computing the course and velocity of the oncoming ICBM after it has set its own defense mechanisms into motion and to get this information to the defensive device that's en route to meet the ICBM.

- **Limitation**—It's this last requirement that explains the geographical limitation on current missile defense systems—why they are being located right at the target area they are assigned to defend.

In the present state of the art, to compute the velocity of the oncoming missile and its trajectory, of course, from some other point than the target area takes a computer as big as a room-size IBM 704. Obviously, an anti-missile missile couldn't trail such a computer behind it. But if the interceptor missile starts out from the target area to meet the attacking missile headon along the ICBM's own trajectory, it needs only some small corrections in its flight course—corrections that can be fed from ground control stations.

Missile experts, however, regard this geographical limitation as dangerous. To get around it, and permit interceptor missiles a greater range, the future anti-missile missile will have to have either (1) its own tremendously refined computer system, or (2) some means of luring the oncoming ICBM into the defensive missile's own path.

- **The Kill**—But the interceptor missile's primary job, of course, is to destroy the ICBM's warhead or render it harmless before it reaches its target.

Because current thinking seems to point to the use of a small, light interceptor missile, the fulfillment of this task will probably mean arming the interceptor missile with its own nuclear warhead. No other known explosive would be capable of demolishing the H-bomb payload of an ICBM.

Right away, that raises the odds against any quick or easy defense.

If a missile is used as the anti-ICBM defense weapon, at best one in 10 of the interceptors is likely to hit the oncoming target. That means using 10 to 20 interceptors against any single attacking missile. Any adequate defense system, therefore, would take a huge supply of atom bombs, and would severely overtax the U.S. capability for producing fissionable material.

If all other technical problems could

be solved, and a missile proved out as the best anti-missile defense, the cost of a nuclear-armed interceptor missile defense would be staggering. The lightest nuclear warhead that could be turned out in production quantities, experts say, would cost over \$1-million.

- **On the Road**—Admittedly, the numerous hurdles to be overcome in finding an anti-missile defense system present U.S. scientists with one of the most complex technical challenges they have faced. Various universities, such as Massachusetts Institute of Technology and Princeton, and most leading aircraft companies are struggling with the many problems. The Army and Air Force, and other government research labs, are also deeply involved.

Some positive steps have been taken in recent months. A joint Canadian-U.S. research team is studying the effects of the aurora borealis (or northern lights) on radars that will be used to detect oncoming ICBMs. Some scientists think an ICBM warhead in flight will cause an ionization of the atmosphere similar to the phenomenon that causes the aurora. If this is the case, it would provide a useful means of detection.

Other fundamental research teams are probing the possibility of a defense system not using interceptor missiles. This would involve setting up magnetic or electrical fields—or a combination of the two—to deflect the oncoming ICBM from its target or turn it back. But this research is still in a highly theoretical stage, and the anti-missile missile looks like the great white hope for some time to come.

- **How It Stands**—How much money is going into anti-missile work is not easy to determine. The best guess in Washington is that the total being spent on anti-missile research in the current fiscal year adds up to something under a hundred million dollars. Army enthusiasts are calling for a big jump to \$6-billion in the next budget—but such a figure is considered unlikely.

The Army's Nike-Zeus aircraft interceptor is reported as closest to getting anywhere in the anti-missile field. But even today, two and a half months after the first successful Russian Sputnik, the Nike-Zeus program is lagging well behind schedule and scrimping for funds.

Contractors for the Zeus are Douglas Aircraft Co. for the airframe and Bell Laboratories for the control equipment. Bell has reportedly done extensive work on guidance and computer systems, but

NUCLEAR NEWSLETTER

(ADVERTISEMENT)
FROM WORTHINGTON

As a result of extremely successful development work begun some 3½ years ago, **Worthington is now producing canned rotor pumps for Navy shipboard use.** Units circulate primary coolant in the reactor systems of atomic submarines and the frigate prototype. These motor driven units operate at 3,500 rpm and feature a number of significant design developments.

Another successful development job was performed recently for the **Aircraft Nuclear Propulsion Program.** Worthington's contribution included the design and model testing of pumps for the primary circuit.

Currently Worthington is continuing design and development work on **water-lubricated bearings and special seals** for application in the primary circuits of nuclear power generation plants.

The nuclear field certainly involves a wide variety of equipment. Almost all of Worthington's broad line of power products—pumps, compressors, turbines, engines, power transmission components—are used by this industry. **Worthington has already delivered special modifications of many products for use in special extraction processes.**

Worthington opens for business on packaged secondary circuits! Design and study work has been finished for complete secondary circuits of nuclear plants up to 12,500 kw. Worthington is one of the few manufacturers in a position to take complete responsibility for design and performance of the secondary circuit. They can also supply all major equipment involved, from their own standard manufacture. Nuclear experts forecast a big export market for these plants in the 5 to 10,000 kw range with estimates as high as 1,500,000 kw of capacity needed in the next few years. . . . Anyone interested?

Worthington is alerting its overseas organization to the coming boom in the nuclear market. With 121 distributors and 11 manufacturing plants around the world, Worthington will be a strong factor in this export market.

Reactor builders have asked Worthington to participate in informal study groups to arrive at proposals for the development of new equipment for reactor systems. Worthington finds these groups one of the best ways of keeping abreast of the fast changing industry.

Interesting facts turned up in a recent Worthington survey in the Nuclear industry:

- Canned rotor pumps are given a 50/50 chance for acceptance with liquid metals such as sodium.
- Majority will consider controlled in-leakage pumps for water or water slurries.
- Immersed bearings will be satisfactory for water, but opinion is split on liquid metals.
- Most primary systems will be designed to eliminate valves, wherever possible, since this is a source of expense and trouble.
- Future pressure vessels may require welding positioners up to 100 tons to handle them.
- Gas cooled reactor closed cycle gas turbine systems will undoubtedly have their first application in the Marine field within 5 years.
- Water will be the coolant in most reactors built for power generation or ship propulsion in the next 5 to 10 years. The industry may then switch to slurries and liquid metals. Ultimate choice: gas cooled reactors.

M73



Crane Control So Sensitive You Can Cap a Bottle

Lowering a crane hook to cap a bottle demonstrates but one of many operational controls engineered into Shaw-Box cranes. Travel, traverse, lifting and lowering are so completely controlled you can entrust your most expensive tools to a Shaw-Box crane. For instance, bridge end trucks built without "open gearing" keep grease off the runway, prevent whipping and skewing. Wheel traction is uniform — stops and starts are smooth, fully controlled.

Complete control of all crane operations — this is what you want and get from Shaw-Box. It includes precision machinery that assures crane performance as smooth as that of a fine watch.

You name the crane — Shaw-Box can build it. Whatever the type, capacity or application, you will get controls, machinery and construction that surpass your highest expectations in crane service, safety and economy. We welcome a discussion of your requirements.

**Shaw-Box®
CRANES**



MANNING, MAXWELL & MOORE, INC.
Shaw-Box Crane & Hoist Division • 356 W. Broadway • Muskegon, Mich.
In Canada: Manning, Maxwell & Moore of Canada, Ltd., Galt, Ontario.

the radar has apparently caused a snag. Informed sources say Bell wants to use its own relatively short-range radar system rather than taking on an untried, longer range (3,000-mile) system.

The Air Force's Wizard, out under contract to Convair and Radio Corp. of America, is further away from production—at last reports, five years from the firing pad. Basic differences between the Zeus and Wizard are two. The Wizard is planned to sport a more sophisticated form of radar guidance, and will run on solid fuel. The fuel is important in any "pushbutton" defensive missile. A liquid-fueled missile requires a long preliminary count-down—two hours for Jupiter and Thor, 11 hours for the ill-fated Vanguard satellite rocket. A solid-fueled missile can be kept ready to go, except for installing the warhead.

A third, very hush-hush Army project called Plato has in recent months been in an off-again, on-again state. Originally studied competitively by Cornell Aeronautical Laboratory and Sylvania Electric Products, Inc., its contract is currently held by Sylvania. But Plato isn't intended for anti-ICBM or anti-IRBM defense; it's a highly mobile system for use in the field, involving radar plus a device to offset an artillery-like ballistic missile (such as the Army's Redstone).

A few other private companies hold anti-missile research contracts. Lockheed Aircraft and Raytheon Mfg. Co., hold an Air Force contract for a study program. General Electric has been working on a defense system based on a modified early warning setup plus a specially developed computer.

• **Area Defense**—So far at least, what all these and a half-dozen other companies have come up with goes right back to where they started from. At best, all the U.S. can produce for anti-missile defense at the moment is a limited, area defense system.

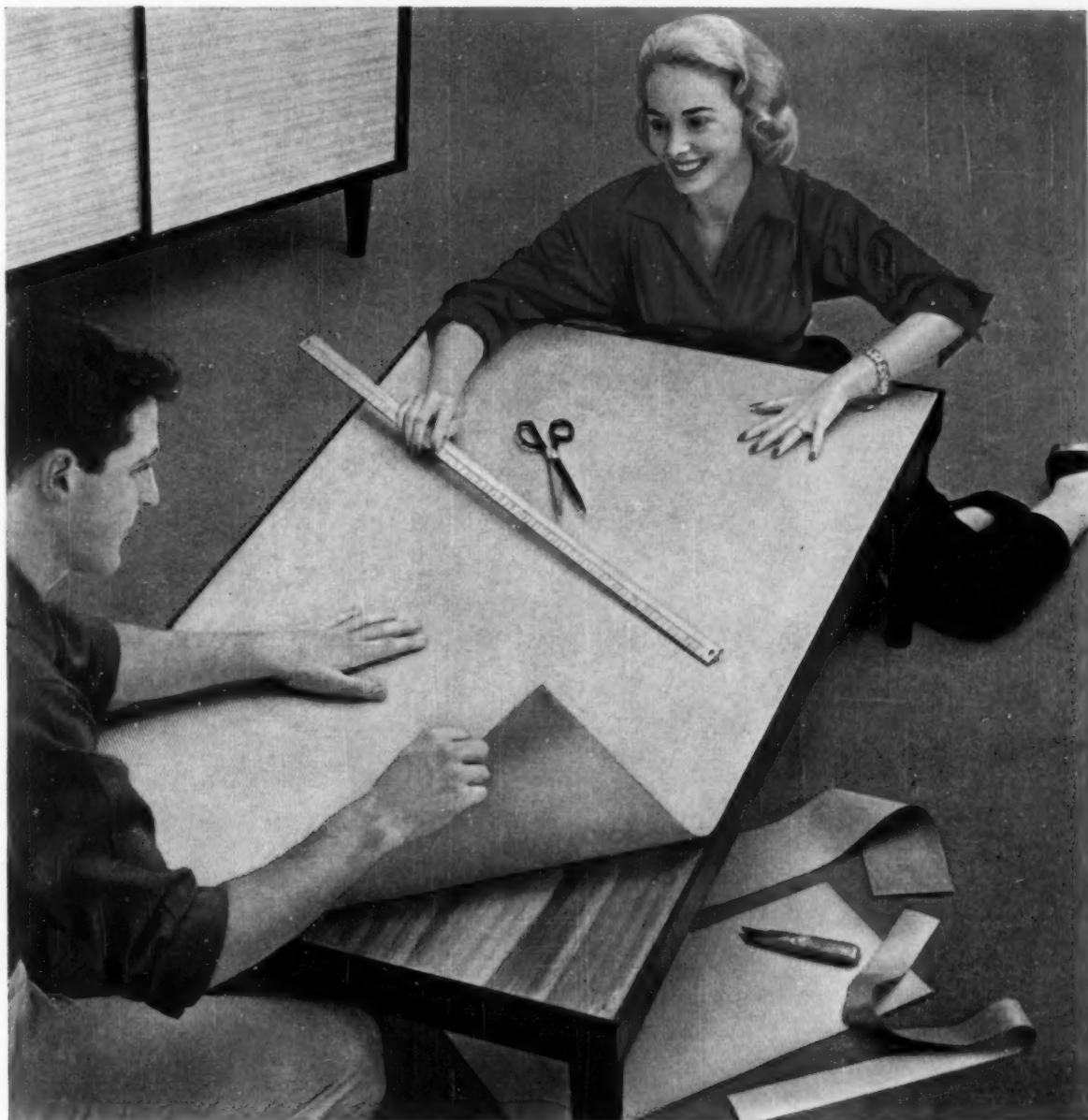
This is in line with the conclusion reached earlier this year by Rand Corp., a nonprofit corporation organized as an extension of the Air Force's Air Staff to conduct independent studies. Rand Corp. suggested that U.S. missile defenses should be concentrated now to defend Strategic Air Command bases rather than the big metropolitan areas.

SAC currently has 37 U.S. bases and 12 overseas. But even this total, Rand said, could not be adequately defended by the kind of anti-missile defense systems we hope to have within a year or two. Rand proposed defending only the major SAC operational bases with weapons such as Nike-Zeus and Wizard—in an effort to restore something like the stalemate that existed before the first successful firing of a Soviet ICBM.

At best, of course—as everyone connected with anti-missile research knows—such a solution is only temporary. **END**

tomorrow's products today...through **ENJAY PETROCHEMICALS**

Flexible metalized plastic . . . a brilliant new decorating idea



Now metals are being bonded to tough, transparent plastic film. Result: glittering new covering materials with myriads of practical applications for do-it-yourself fans and manufacturers. A vital ingredient in this plastic film is supplied by the Enjay Company. In plastics, as in other fields, Enjay petrochemicals help make possible tomorrow's products—today. Eight conveniently located offices stand ready to serve you.



ENJAY COMPANY, INC., 15 West 51st St., New York 19, N. Y.
Other Offices: Akron • Boston • Chicago • Detroit • Los Angeles • New Orleans • Tulsa



*Pioneer in
Petrochemicals*



Margie McNally, Miss Rheingold, 1957

HALLMARKED FOR TOP QUALITY BY ALCOA WRAP LABELS Top packaging team—Milprint Inc., Liebmann Breweries, Inc., and Alcoa—creates distinctive "product insignia" that stamp this famous brand as a beer of unparalleled excellence. Alcoa® Wrap Aluminum Foil labels brilliantly sell "Rheingold" name and identity . . . never fade or peel off, even when water-soaked in beer coolers. Call your converter—Get the labels that smooth on, stay on, like gleaming enamel . . . that identify your product as best of its kind and outshine competition . . . get the important selling plusses of Alcoa Wrap labels.



"ALCOA THEATRE"
Exciting Adventure
Alternate Monday Evenings

You're always ahead with Alcoa
... greatest name in aluminum

INTERNATIONAL OUTLOOK

BUSINESS WEEK

DEC. 21, 1957



After a slow and disappointing start, the NATO summit meeting seemed at mid-week to be making headway in meeting the Soviet challenge (page 15). But differences over European-based missiles and over proposals for East-West talks left little time for the West's economic problems.

Pres. Eisenhower and his advisers went to Paris, in fact, without much in the way of concrete economic proposals. The State Dept. has been leery of schemes such as the Pella Plan (BW—Dec.14'57,p141) for a joint U.S.-European aid effort in the Middle East.

The big thing Pres. Eisenhower offered in the economic field was a promise to fight for further liberalization of U.S. trade policy and to ask Congress to increase the lending resources of the Export-Import Bank by \$2-billion. If Ex-Im gets the extra funds, they might well be used to help not only NATO countries out of financial difficulty, but also nations like India and Brazil.

Some European observers are worried, as they watch the U.S. business slide gain momentum, that Washington's economic plans will fall far short of the Western World's needs. These observers fear that the U.S. downturn will catch the outside world, especially Europe, in a weak position. And they argue that a new international approach is needed to prevent a damaging loss of confidence in the international trading system—and in the U.S. ability to guide the West economically.

— • —

Congress is almost sure to go along with Eisenhower's Ex-Im proposal and increase the bank's capitalization from the present \$5-billion to \$7-billion. But the Ex-Im increase may encourage Congress to try to short-change the Development Loan Fund, set up to provide credit on easy terms for underdeveloped countries.

From the angle of potential borrowers, there are other drawbacks to the proposal. Though Ex-Im isn't required by law to follow a "Buy American" policy, most of its loans have been for purchases of U.S. goods by foreign countries. Many countries now find it cheaper to buy goods in Western Europe and Japan.

— • —

Khrushchev is breaking up the industrial empire built by the Soviet Ministry of Defense after Stalin's death.

Thus, Khrushchev is getting closer to one of his main goals: Direct control of all Soviet industrial production, both military and civilian.

The Ministry of Defense, under the now demoted Marshal Georgi Zhukov, gradually brought the production of all military hardware under its wing. Khrushchev is following up Zhukov's ouster by taking administration of military production out of the hands of the Red Army and placing it under his own Communist Party underlings.

Khrushchev's move has a double impact:

- He is bolstering his political position by getting a firm grip on the last sector of the Soviet economy, which in the earlier phase of "decentralization" escaped his control.
- He is trying to insure a continuing Soviet lead over the U.S. in the crucial race to put intercontinental ballistic missiles into the field. That's evident in the appointment of Dimitri F. Ustinov—formerly with the Minis-

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

DEC. 21, 1957

try of Defense—as Deputy Prime Minister in charge of military production and as the Kremlin's missile czar, reporting directly to Khrushchev.

Indonesia is still in a state of chaos, following the Communist-directed takeover of Dutch properties. But the Communist grab for power in Djakarta, Indonesia's capital, has failed—for the time being.

Pres. Soekarno tried to shift political power from the government, headed by Premier Djuanda, to his own Communist-supported National Council. The army—and Djuanda—blocked this move.

Last weekend Soekarno and his Communist allies had to make a choice: Either risk opposition from the army and possibly set off a full-scale civil war, or pull in their horns temporarily. They decided to retreat. Now Soekarno plans to leave Indonesia in two weeks "for a rest."

Soekarno's departure by no means lessens the danger of more trouble.

Violent nationalist fever is still in the air. Food shortages and pillaging are bringing on famine in some areas. And there's fear among foreigners in Indonesia that the government—sooner or later—may seize other foreign properties, including private U.S. holdings, if the West stays neutral in Indonesia's fight with the Dutch over New Guinea.

In the weeks ahead, the test of Communist strength may lie in the Djuanda government's effort to shake off Communist inroads and Indonesia's response to Soviet offers of technical help and foodstuffs.

West Germany's large reserves of dollars and other hard currencies are rising again—and this fact is worrying other West European governments.

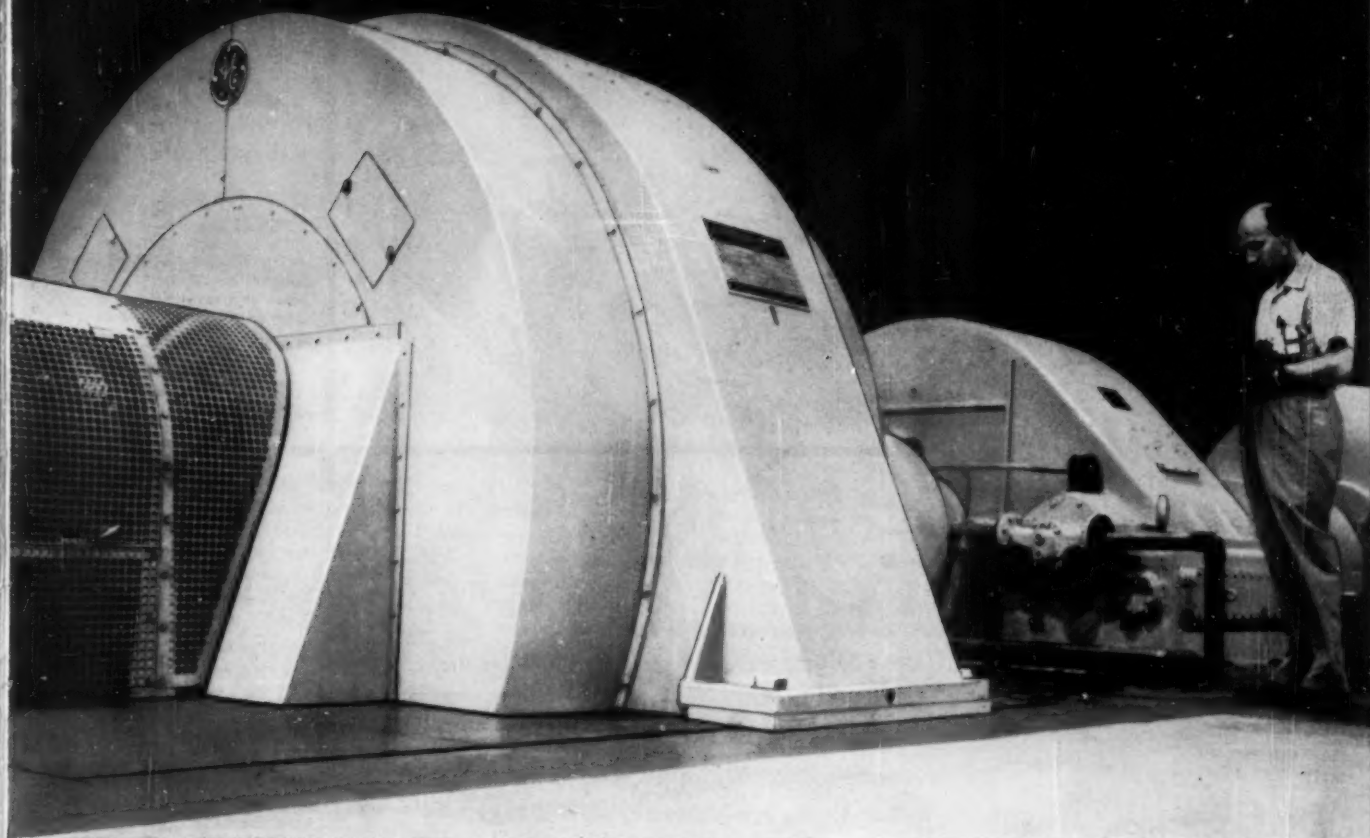
In the summer and early fall, "hot money" flowed into Germany. Its reserves reached an all-time high. There was talk of an upward revaluation of the deutsche mark. Bonn's denials of a revaluation and Britain's dramatic boost in the discount rate helped to stop the flow. But the shift of money out of Germany amounted to only about \$100-million. Some observers hoped for several times that amount.

Since October, Bonn has made substantial foreign loans. But even this hasn't helped bring down reserves, which now amount to \$5.7-billion—or slightly above what they were in October.

In Venezuela, the reelection of Dictator Perez Jimenez to another five-year term is a green light for U. S. and foreign business interests. Perez Jimenez's regime has welcomed U. S. investments, which now run close to \$3-billion—the largest portion in oil exploration and production.

Last weekend's election was a rigged plebiscite, with no candidate to vote for except Perez Jimenez. The government claims the vote was so much in its favor that it may release all political prisoners from jail.

Meanwhile, the provisional government in Argentina has been cleaning up the bookkeeping it inherited from ex-Dictator Juan Peron in preparation for next February's national elections. The biggest change so far: an "honest" budget for 1958 that includes such autonomous, deficit-ridden state enterprises as YPF, the government oil company (BW—Dec.14'57,p62).



EQUIPPED WITH SPEED-INCREASING GEARS...

Economical General Electric Motors Drive Pumps, Compressors at Optimum Speed

Large General Electric motors, equipped with speed-increasing gears, are providing economical drives for boiler feed pumps and compressors in several different applications. A complete evaluation of the economics of initial investment, power costs, and maintenance requirements is necessary before selecting drives in excess of 9,000 hp for pumps and compressors. And General Electric's large motors, with gears, provide this economy by permitting the selection of the most suitable motor and driven machine speeds.

GENERAL ELECTRIC IS NOW ENGAGED in active projects involving both constant-speed synchronous and induction and variable-speed induction motors with this gear arrangement. In power generating stations, chemical plants, refineries, water stations, and raw sewage plants, these G-E motors, in ratings from 9,000 hp to over 20,000

hp, combine high horsepower and optimum speed to provide dependable, flexible service.

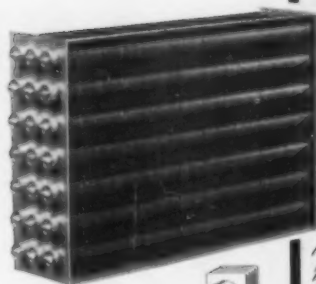
EXACT MATCHING of motor drive to pump and compressor speed, either direct or through gears, will result in major savings for you. To specify these G-E drives is to take advantage of General Electric's years of engineering and manufacturing experience and extensive research facilities. Contact your nearest G-E Apparatus Sales Office for further information and expert assistance. General Electric Company, Schenectady 5, N. Y.

775-B

Progress Is Our Most Important Product

GENERAL  ELECTRIC

Air Conditioning necessary at -65°



Heat Exchanger
"Inner Fin"



Jet propelled aircraft, travelling 1600 miles an hour in temperatures of -65° , develop skin temperatures of approximately 350° F. Without air conditioning, pilots could not fly at these speeds.

But...

While air conditioning jet aircraft is a specialized application, Dunham-Bush engineers often have to solve the unusual in air conditioning problems.

Patented Dunham-Bush "Inner Fin" makes possible a *smaller, lighter* heat exchanger, necessary for jets. Dunham-Bush aircraft heat exchangers include air-to-air, liquid-to-air, liquid-to-liquid types of all aluminum or stainless steel construction.

Whether your problem is "unusual" or not . . . whether it's in air conditioning, refrigeration or heating . . . Dunham-Bush has the products and engineers to meet your needs.



Want to know more about us? For free brochure, "This is Dunham-Bush", write Dunham-Bush, Inc., West Hartford, Conn.

DUNHAM-BUSH

Serving **YOU** through

AIR CONDITIONING • REFRIGERATION • HEATING • HEAT TRANSFER

WEST HARTFORD, CONNECTICUT • MICHIGAN CITY, INDIANA • MARSHALLTOWN, IOWA • RIVERSIDE, CALIFORNIA • UTICA, NEW YORK

heat-x

HEAT-X, INC.
BREWSTER, N.Y.

BRUNNER

THE BRUNNER CO.
GAINESVILLE, GA.

SUBSIDIARIES

DUNHAM-BUSH (CANADA), LTD.
TORONTO, CANADA

DUNHAM-BUSH, LTD.
LONDON, ENGLAND

BRUNNER CORPORATION (CANADA) LTD.
PORT HOPE, ONTARIO

Teamsters' Fate Hangs on Trials

Outcome of Pres.-elect Hoffa's legal difficulties is the key to whether his union's expulsion from AFL-CIO is short-term, or long and potentially troublesome for everyone.

SOME of the highest stakes the labor movement has ever wagered are riding on the court trials that involve the International Brotherhood of Teamsters.

The legal troubles involve only a handful of labor leaders who run the 1.4-million-member trucking union, but the outcome of the trials will shape labor's future for a long time to come.

• **Stakes**—The decisions offer these potentialities:

- For organized labor, they can mean the difference between peace or war in a divided union movement. Plans for jurisdictional warfare between AFL-CIO unions and the Teamsters they expelled are deliberately being held up pending the verdicts.

- For management men, the outcome is equally vital—whether their plants become a battleground when the truckers meet members of other unions at the loading docks.

- In Congress, decisions in the Teamsters cases are likely to affect the extent of the racketeering investigations next year and, in time, the proposals for legislative curbs aimed at corruption in general and the Teamsters in particular.

I. Man in the Middle

At midweek, the New York trial of Teamsters Pres.-elect James R. "Jimmy" Hoffa on wire-tapping conspiracy charges was ready for a jury. Across the country, in Seattle, still-reigning Pres. Dave Beck had been convicted of grand larceny involving \$1,900 of union funds. In the nation's capital, a trial to prevent Hoffa from becoming president of the union continued; witnesses testified Hoffa forces "rigged" his victory.

And, the familiar ring of accusations against the Teamsters could be heard again in the big caucus room of the Senate Office Building where the McClellan racket investigating committee continued probing Teamsters violence in 1951 labor troubles in Tennessee.

The pressures on the IBT from all sides are enormous. But the burden, although it might seem to be shared by his fellow defendants, is borne almost entirely on the broad back of the stocky

Midwest labor leader, Hoffa. What happens to anybody else doesn't really matter.

• **Key Figure**—Hoffa is the key to whether the Teamsters expulsion from AFL-CIO is short-term—or long and potentially troublesome for everyone. Under flat terms laid down by AFL-CIO Pres. George Meany, the Teamsters must stay out of the federation until Hoffa loses all of his international offices in the Teamsters. The trials are the test.

Some eight months ago, the prime anti-corruption target of both the McClellan committee and the AFL-CIO was Dave Beck. By last week, when he was convicted of pocketing funds for the sale of a Teamsters-owned Cadillac, Beck had declined in importance in labor to a point where the verdict hardly caused a ripple.

While he is still Teamsters president—on the record—the once-formidable power of Beck has dwindled to the point where his attorney talked in court of Beck's "waning career." While he is appealing this conviction, Beck must prepare for another trial next April on charges of evading \$240,000 in income taxes between 1951 and 1953.

• **Still in Office**—With all this, Beck is still occupying his plush office at Teamsters headquarters in Washington. The 63-year-old labor leader has often proclaimed that no convicted Teamsters official would lose his job until all legal appeals have been exhausted—and he apparently intends to follow that policy in his own behalf. The eventual fate of an officer who has gone through the legal mill up to the Supreme Court and remains convicted is undetermined, since Teamsters Vice-Pres. Sidney Brennan—convicted of extortion—still holds office on a legal basis although he was not reelected at the convention.

Beck and Brennan actually can thank the courts for the fact that they still hold their jobs. Rank-and-file Teamsters challenged the recent election and obtained a court injunction that keeps Hoffa and others chosen then out of IBT office until the validity of the convention is finally determined.

This trial, expected to run well into January, centers on the plaintiffs' charges that Hoffa forces illegally "stacked" the convention last September with delegates chosen in violation of individual democratic rights and who would do Hoffa's bidding.

So far, Hoffa hasn't had to appear in this case; he has attended but not testified at his wire-tapping trial in New York. With two co-defendants, Owen Bert Brennan, head of Teamsters Local



DAVE BECK, although convicted, is still lame-duck president of the Teamsters.

337 in Detroit, and New York wire-tapper Bernard Spindel, Hoffa is accused of conspiring to tap telephones illegally in his Detroit offices to hear what his aides were telling Senate racket investigators.

A possible third Hoffa trial, on perjury charges growing out of the wire-tapping case, is still pending. However, a recent Supreme Court decision barring use of wire-tapping evidence in federal cases may prevent this case from going into court, since the prosecutor had planned to use such evidence.

II. The Trials Hurt

While the Teamsters leaders are having their troubles in court, IBT is, admittedly, a driverless union. Major policy decisions are being held up pending outcome of the trials, says one official. The ruling executive board is "just marking time," he adds.

But the Teamsters' attorneys are

busy. Some of the top truck union lawyers, such as Dave Previant of Seattle and George Fitzgerald from Detroit, are working on the court cases. Outside attorneys, including Edward Bennett Williams, also are arguing for the defendant Teamsters.

This rash of legal troubles caused crusty, 68-year-old Teamsters Secy.-Treas. John English to vent his wrath during the move to expel the Teamsters at the recent AFL-CIO convention in Atlantic City.

Snorted English, during an appeal to the delegates:

"We have \$40-million and I wish to God we didn't have it, because when we had only \$1.50 we never had any trouble. But the minute we get a dollar in the treasury all these lawyers are taking it.

"How in the hell did we run our organization when there weren't any attorneys? There's seven or 10 of them now robbing us, a hundred bucks a day, and they can't agree among themselves. How in hell can we win these cases?"

The financial hurt is evident. Hoffa has said he mortgaged his Detroit home to pay his legal bills. His top adviser, Harold Gibbons of St. Louis, has appealed to all Teamsters payroll officers to pledge \$10 a month to help Hoffa pay attorney costs. Gibbons says he'll be happy to collect \$150,000.

III. Watching—and Waiting

When it came to expelling the Teamsters at the AFL-CIO convention, Meany and other officials kept the Hoffa trials strictly in mind. Refusing any deals that would temporarily sideline the Detroit union leader, Meany forced the ouster when Hoffa wouldn't unconditionally step down—but kept the door wide open for the Teamsters to return if he does.

This strategy meant the Teamsters hardly left feet first. Meany advised them no rival union would be chartered; they could keep their mutual aid pacts with AFL-CIO unions; their officers who hold state and local AFL-CIO offices could keep them by obtaining cards from other unions.

The Teamsters, waist-deep in the courts, were happy for this kind of deal.

- **Congress Waits**—Congress, too, is doing some watching and waiting. The McClellan committee is armed with more evidence against the truck union leader. If Hoffa survives in court, he will be called back before the Senate investigators.

The AFL-CIO's ability to handle the corruption issue will be a factor in the labor legislation picture. If the Teamsters stay out of the federation, and a union war breaks out, it enhances possibilities of stronger labor laws.

Big Money in Fringe Benefits

The extras are getting less marginal all the time, a Cleveland survey shows. Average cost to the employer has risen 11¢ per man-hour in the past two years.

The cost of fringe benefits to Cleveland employers increased an average 11¢ an hour during 1956-57, according to a survey just released by Associated Industries of Cleveland, a management association.

What happens in Cleveland, a highly diversified manufacturing area, has always been a good indication of what goes on generally, so AIC surveys are watched carefully by management around the country.

AIC checked 174 companies in the Cleveland area that employ 73,150 hourly-paid production workers. It found that the average cost to the employer of fringe benefits increased from 38.54¢ per man-hour in 1955 to 49.5¢ in 1957.

- **Expensive Extras**—Pay fringes first claimed attention during World War II when subsidiary benefits provided a "safety valve" for easing the pressures that were building up under wage controls. Since the war, such extra benefits have figured prominently in nearly every major management-union settlement. Bargaining on fringe issues in 1958 is likely to be just as tough as bargaining over wages.

The AIC survey in Cleveland turned up a relationship between the size of the company and its fringe costs. The average cost of supplementary benefits in companies employing more than 1,000 hourly-paid workers increased the most—from 39.62¢ in 1955 to 52.62¢ in 1957. According to AIC, pensions, insurance, vacations, gifts to employees, and the rest periods, are the benefits primarily responsible for the large companies' higher fringe costs.

Concerns employing 100 or fewer hourly-paid employees averaged less than half as much increase in fringe costs as the largest employers. Their costs went up only from 35.64¢ to 41.47¢ an hour over the two years—a 5.83¢ increase, compared with 13¢. Medium-sized companies showed a medium-sized increase in their fringe benefit costs—7.75¢ an hour from 1955 to 1957.

- **Large Ones Lead**—The reason for the difference in the rate of increase in fringe costs, according to AIC, is that "the large companies are usually the first to grant fringe benefits, and some of the fringes already granted are improved." AIC finds that paid vacations, for example, are lengthened, additional paid holidays are granted, and

pensions and insurance coverage may be increased.

The cost of providing pensions was the largest single increase in benefit costs reported in the AIC survey. Cost of vacations came second. Together, these items cost employers more than 2¢ an hour more in 1957 than in 1955. Vacations cost employers nearly 11¢ an hour, and pensions ran still more.

Not all fringe items increased in hourly costs over the two-year span surveyed by AIC. Cafeterias, credit unions, surgical-medical cost, jury duty pay, military reserve pay, and severance pay were listed by AIC as declining in cost to the employer. Bonuses—Christmas, semi-annual, yearend, length of service, and others, excluding production—declined 3¢ in cost to the employer, while gifts and awards to employees increased by almost the same amount.

NLRB Steps In to Settle Rival Union's "Boycott"

The National Labor Relations Board this week intervened in the Sheet Metal Workers' 12-year campaign for jurisdiction over Burt Mfg. Co. employees in Akron. The board's general counsel charged SMW with an illegal secondary boycott of Burt Mfg.'s products to coerce the company into recognizing the Sheet Metal Workers as bargaining agent for employees already members of the United Steelworkers.

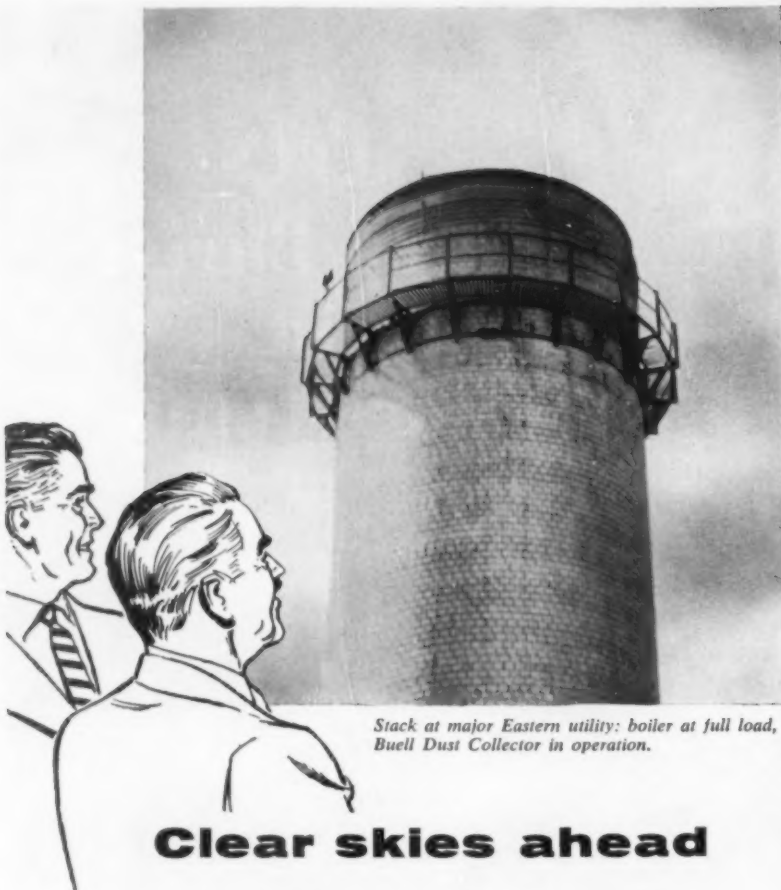
The company's employees have been represented by the United Steelworkers since 1945. The rival SMW has stubbornly contended that they should be in its jurisdiction. Its members have consistently refused to handle Burt Mfg. products on construction jobs, under contract clauses that give them the right to refuse to handle "non-union" material.

Since the AFL-CIO merger, both the Steelworkers and Burt Mfg. have tried to get a federation crackdown on SMW tactics. But, although AFL-CIO "cease and desist" orders have been handed down, the union and employer complain the Sheet Metal Workers "boycott" practices have continued. SMW says there is no boycott now, that if anyone isn't handling Burt Mfg. material it's on a strictly personal basis. The NLRB test is likely to be on that issue. **END**

A black and white illustration of a church at night. The church has a large, ornate Gothic-style window on the left and a smaller arched entrance in the center. A group of people, including men, women, and children, are gathered outside the church, some standing near the entrance and others further back. Two large, decorated Christmas trees are visible in the foreground, one on the left and one on the right. The scene is set against a dark background, suggesting it is nighttime.

Let's
Keep Christ
in
Christmas

Norfolk and Western Railway



Stack at major Eastern utility: boiler at full load, Buell Dust Collector in operation.

Clear skies ahead

Clear skies ahead on the profit front, too: not only do Buell Dust Collection Systems help public relations and employee morale... eight out of ten installations pay for themselves in just a few years!

Expert Buell engineers can analyze *your* dust recovery needs. Decades of experience in field and laboratory and hundreds of installations back up every recommendation. Performance standards are written into every contract.

For more information, send for a copy of the reference booklet, "The Collection and Recovery of Industrial Dusts." Just write to Dept. 30-L, Buell Engineering Company, Inc., 123 William Street, New York 38, N. Y.



buell®



Experts at delivering Extra Efficiency in
DUST COLLECTION SYSTEMS

How Unions

U.S. unions have beefed up their membership rolls by almost 1-million members and fattened their treasuries by \$162-million during the first two years (1955-57) since the AFL-CIO merger (chart). Union revenues rose by an even faster rate—up \$162-million in 1957 over 1955. These figures come from a survey of 191 unions made by the National Industrial Conference Board.

• **Discrepancies**—The NICB survey, based on the declared membership of the unions covered, is a rule-of-thumb guide to the numerical and financial strength of organized labor. But there are several unavoidable discrepancies in reporting union membership and revenue. The NICB survey, for example, credits the AFL-CIO with a 17-million membership prior to its recent convention, while the federation's financial report puts the figure at 14.4-million. The expulsion of the Teamsters and two other unions on charges of corruption cost AFL-CIO approximately 1.7-million members. NICB-adjusted figures scale down AFL-CIO membership to slightly over 15.2-million.

The three reasons cited in explanation of the discrepancies in the figures illustrate the difficulties that crop up in the survey. AFL-CIO convention figures reflect per capita payments for U.S. members only, excluding 829,944 Canadians; the per capita is not paid on full membership—left out are the unemployed and retired and striking members; and some unions do not pay per capita on what the federation considers their full membership.

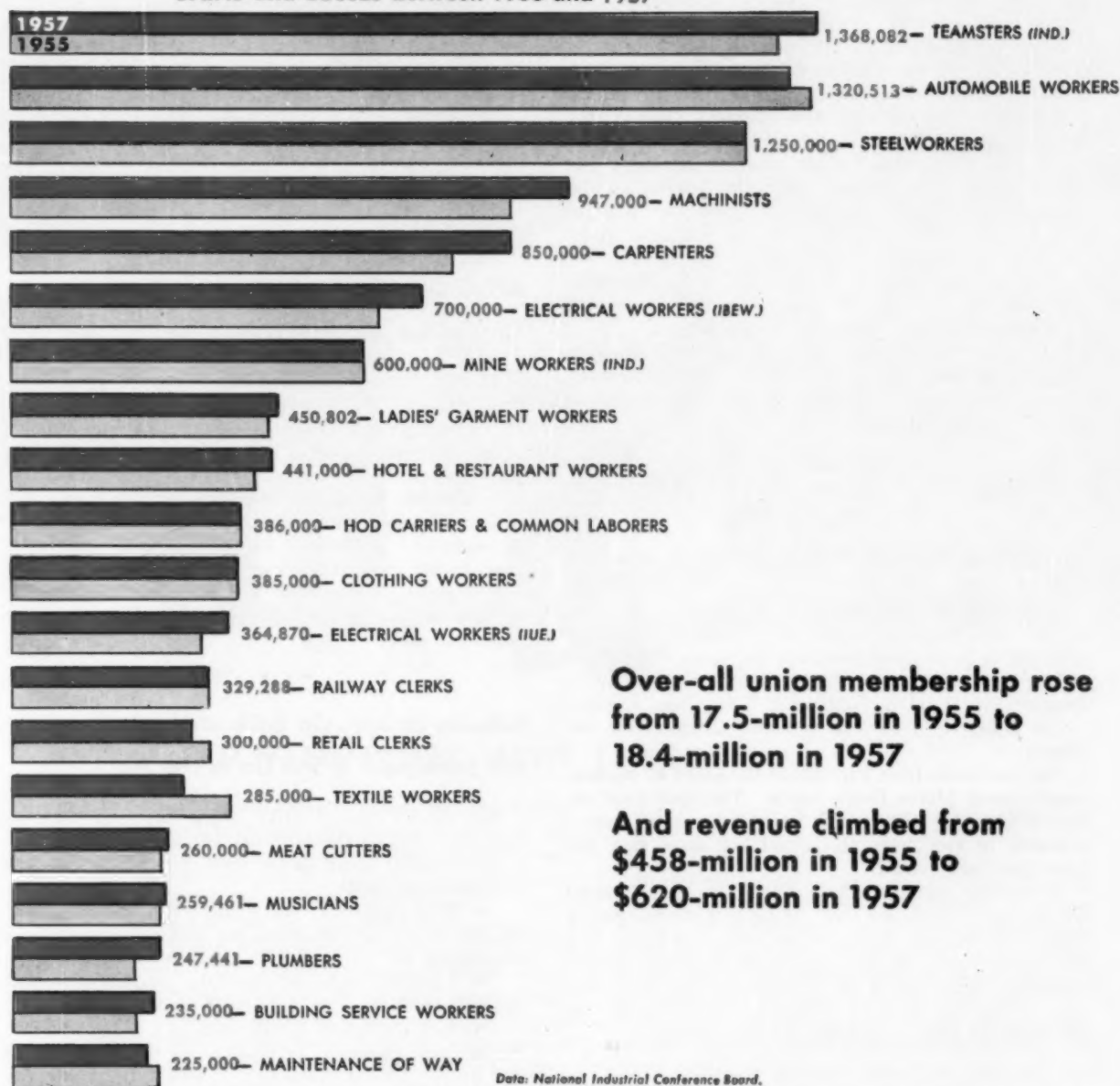
• **The Findings**—Here are the NICB findings:

Membership gains. Forty-nine unions made gains of 2,000 or more members, for a total increase of close to a million members, over the two years 1955-57. However, not all were new union members. Of the six unions making the biggest gains—a membership growth of more than 50,000 each—three received a substantial part of their boost in membership through either absorption or merger. The AFL-CIO Machinists absorbed several districts and locals of the United Electrical Workers, Ind., which accounted for a considerable portion of its 98,206 member increase. The International Brotherhood of Electrical Workers (IBEW) reported a gain of 75,000 members, which includes a number of former independent telephone unions absorbed by IBEW. And the State, County & Municipal Employees union absorbed a CIO counterpart to augment its membership, which rose by 70,000. Other big gainers include the Carpenters (100,000), the

Have Fared Since the Merger

Nation's Twenty Largest Unions

GAINS and LOSSES between 1955 and 1957



Over-all union membership rose from 17.5-million in 1955 to 18.4-million in 1957

And revenue climbed from \$458-million in 1955 to \$620-million in 1957

Data: National Industrial Conference Board.

Teamsters (68,082), and the Bricklayers (54,445).

Membership losses: Eighteen unions suffered membership losses of 2,000 or more members, for a total loss in union membership of 250,832. Railway unions were heavy losers. But the CIO Textile Workers Union, losing 79,970 members, and the United Auto Workers, 32,604, suffered the biggest losses for individual unions.

Union Dues: Total receipts are diffi-

cult to pin down. Of the 191 unions surveyed, 108 reported a definite amount—or a minimum—to be paid by their members as dues. Multiplying the declared membership total of 18.4-million by an average of minimum dues payments (annually \$33.74, monthly \$2.81 per member), NICB estimates the minimum amount of dues collected to be about \$620-million in 1957. The comparable figure for 1955 was \$458-million.

Of the 191 unions checked by NICB, 45 reported dues increases.

Per capita taxes: International union treasuries will net about \$254-million in 1957 compared with \$229-million in 1955. Nearly one-third of the unions covered in the NICB survey increased the portion of union dues going to the international union. However, NICB estimates that considerably more than half of the dues receipts stay with the local union. **END**

In Labor

...

Fanning, Career Lawyer in Pentagon, To Succeed Murdock on Labor Board

John H. Fanning, since 1943 a career Pentagon lawyer specializing in labor relations for the military, has been named to the National Labor Relations Board by Pres. Eisenhower. He replaces Abe Murdock, last of the Truman appointees on the five-man board.

Fanning, 41, began his government career in the Labor Dept., was at one time labor adviser to the Secretary of the Army and, until his new appointment, was director of the Office of Domestic Programs under the Assistant Secretary of Defense for Manpower.

Fanning was Secy. of Labor James P. Mitchell's nominee for the NLRB post; he comes from the Pentagon office that Mitchell formerly headed.

AFL-CIO leaders made a strong personal pitch to Mitchell for the reappointment of Murdock. However, they are not expected to oppose Fanning's confirmation by the Senate next month.

...

High Court Will Settle the Issue Of Union's Right to Picket Florida Hotels

Organizational picketing will come under the scrutiny of the U.S. Supreme Court in a review of a Florida state ruling prohibiting picketing for union recognition.

The high court agreed this week to decide whether a local of the Hotel & Restaurant Union was deprived of its rights by a Florida Supreme Court ruling last March.

The case stems from attempts by the union to organize employees of Miami Beach hotels. The state court enjoined picketing because the union represented only a minority of employees and could not show that any labor grievance existed.

In another decision, the federal high court refused to consider a Tennessee court ruling that banned picketing by the Barbers Union at the shop and home of a non-union barber in Memphis. The Supreme Court's refusal in effect upheld the Tennessee ruling that "Unfair to Barbers' Union" picketing could deprive the barber of his right to conduct a lawful business.

...

States With Laws Against Job Bias Urged to Seek New Gains in Unison

Twelve states with laws barring race discrimination in employment were urged last week to fight bias through "a greater pooling of our resources, especially in dealing with industries which cross state lines."

Gov. Averell Harriman of New York proposed more extensive cooperation at a 12-state governors' conference

in New York City. It's necessary, he said, until there are tighter federal laws against job discrimination.

Harriman cited collaboration between his state and New Jersey as an example of how "further gains are possible through a greater pooling of our resources." The two neighboring states jointly probed into the employment patterns of railroads which operate in the states, Harriman said. He added:

"During negotiations in this bi-state effort, the railroads affirmed a nondiscriminatory policy and a study now under way . . . shows that Negroes have recently been hired for the first time in the industry's history as brakemen and in supervisory capacities."

In addition to New York and New Jersey, states having fair employment practices laws are Massachusetts, Connecticut, Rhode Island, Michigan, Minnesota, Washington, Pennsylvania, Colorado, Wisconsin, and Oregon.

...

AFL-CIO to Cast a Chilly Eye On Sunday Openings by Stores

AFL-CIO's retailing unions are worried about Sunday store openings. They complain that weekend operations "tend to encourage employment of part-time workers at less than union wages," and may make jobs "generally more unstable."

As a result, AFL-CIO's executive council is expected to issue a policy statement against Sunday openings at its midwinter conference in Miami Beach early next year. It will urge affiliated unions to refuse to go along with Sunday selling that is not definitely necessary because of the "unavoidable requirements . . . of the community."

...

Subway Strikers Go Back to Work But Settlement Is Still Up in the Air

New York's subway strike ended this week, but the issues that led to the eight-day stoppage aren't settled.

The walkout ended on the basis of promises that may be difficult to fulfill:

- "Fair treatment" was pledged for returning strikers, but disciplinary measures are planned against those responsible for the illegal strike (BW-Dec.14'57,p41).

- A fund to study and eliminate "inequities" in craft pay was promised—but ideas differ on where they exist.

- And, the key to the decision to end the walkout, Republicans promised to push a bill that would strip the public Transit Authority of power to decide the scope of transit bargaining units—which would help the crafts, hurt the industrial-type Transport Workers Union. But, a similar proposal was defeated a year ago.

Meanwhile, on the day the strike ended, TWU won exclusive bargaining rights for 32,329 transit workers, but by a vote that cast doubts on whether the union is still dominant in the transit system. Craft groups boycotted the election; only 51% of those eligible voted. And, despite an appeal by TWU's Pres. Michael Quill for a vote of confidence, TWU got only 10,027 votes—or the support of fewer than a third of all transit workers.



World's newest and fastest

The device pictured above, premiered this month at the Eastern Joint Computer conference in Washington, represents a major contribution to the field of modern high-speed computing. It is the new Stromberg-Carlson Model 5000 High-Speed Electronic Printer.

This is a printer—an *electronic* one. It operates, not from type such as you are now reading, but from "information" pouring from the electronic brains of computing machines. It represents the fastest means of translating high-speed electrical pulses from data processing systems into a printed form useful for the human eye.

The system combines two modern electronic marvels. Part one is Stromberg-Carlson's CHARACTERON® tube. This is much like the heart of your home TV set, except that CHARACTERON receives and displays technical data, like the inset in the illustration. Its speed is almost incredible—up to 10,000 characters a second!

Part two—Haloid's XEROX® COPYFLO® Printer—an-

swers the problem of getting the visual material into printed form quickly, accurately, permanently. In simple terms, the face of the CHARACTERON tube acts like a projector and sensitizes the surface of a selenium drum. These images are developed electronically, using *dry* materials, and transferred to continuous rolls of paper at the rate of one and one-half 8½ x 11 in. pages every second. Such speed is a real economy—since computing equipment time is valued up to \$300 per hour.

Application is both to business and scientific data-processing. Some business applications are invoices, premium notices, inventory listings, bank statements and address labels; in science, data in reduction and graphical analysis.

We would welcome the opportunity to furnish more detailed information. Inquiries should be addressed to Stromberg-Carlson, San Diego, Calif.

"There is nothing finer than a Stromberg-Carlson"



STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION

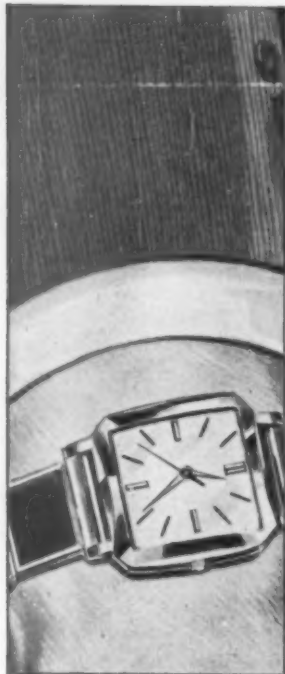
General Offices and Factories at Rochester, N. Y.—West Coast plants at San Diego and Los Angeles, Calif.



Civilian and Military Electronic Products • XY® Telephones and Central Office Dial Equipment, Pagemaster®, Relays and Switches • Sound Systems, Radio and Hi-Fi

BANKING

Guaranty's National Clearing Plan Improves Control and Speeds Flow of Corporate Funds



● With Guaranty's National Clearing Plan you save time ...



● get daily balance reports ...



● speed flow and transfer of funds ...



● gain better control of company funds.

Treasurers save time, reduce "float," cut down credit risks, and establish finger-tip control of funds.

Companies doing business over a wide-spread geographical area face many problems in connection with the flow of customer remittances and the control of corporate funds. Ordinary collection methods and transfer routines leave much to be desired in the way of efficient and up-to-date control of funds through the area of the corporation's activities.

The Guaranty National Clearing Plan, designed specifically to help this type of company, offers four very important benefits:

1. It reduces the time element in the collection of customer check remittances.
2. It gives the treasurer vital balance information in his depository banks each day of the business week.
3. It makes easier and speeds the flow and transfer of funds throughout the corporation's depository bank network.

4. It gives the treasurer finger-tip control of funds in depository banks in the areas served by his company.

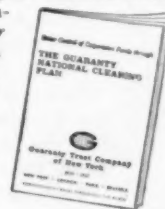
The plan itself is flexible and can be tailor-made to suit the requirements of your own particular company. Basically, the plan involves three major procedures:

1. Fast collection of customers' checks. Through Guaranty's Clearing Plan, remittance collection routines are set up with regional city banks. Customers are instructed to send remittances either to designated Post Office Lock Boxes or to the company's own branch offices. These regional collection facilities are serviced by the regional banks, thus saving as much as five days of check "float" time.
2. Daily bank balance reports. Each day

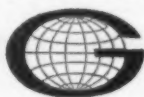
Guaranty furnishes treasurer up-to-date reports of balances in all regional city banks serving as collection concentration centers.

3. Rapid transfer of balances. On instructions from company, accumulated balances in regional city banks are transferred to corporation's central bank.

If you would like to receive more information about The Guaranty National Clearing Plan, simply write on your business letterhead for a complimentary copy of "Better Control of Corporation Funds through The Guaranty National Clearing Plan." Address Dept. BW-13.



GUARANTY TRUST COMPANY OF NEW YORK



140 BROADWAY, NEW YORK 16

Capital Funds in excess of \$400,000,000

Fifth Ave. at 44th St., New York 36 • Madison Ave. at 60th St., New York 21
40 Rockefeller Plaza, New York 20 • London • Paris • Brussels

Member Federal Deposit Insurance Corporation

THE MARKETS

There's Magic in Missiles

Ever since the Russians hurled Sputnik I into space, Wall Street—like the rest of the nation—has been missile-conscious. The performance of stocks that have a stake in the missile business has been one of the few bright spots in the current market. And any company that has anything to do with missiles is being touted as a glamor stock, likely to rocket up regardless of what the rest of the market does.

So far, performance bears out this claim. As the table at right shows, missile stocks are doing well even in a falling market. Many show handsome gains over pre-Sputnik days. Their prospects look good. Total spending for defense may not rise much, but the Defense Dept. is sure to boost its missile spending from \$2.5-billion this year to at least \$4-billion next year. And there's no ceiling in sight for spending on missiles.

• **Caveat Emptor**—Nevertheless, at this stage, investing in missile stocks is a gamble. The entire industry depends on government contracts, and its profits are held down. No one knows if the industry will ever be able to expand faster than the government provides contracts.

Some companies are making money on missile business. But, by and large, the man who invests in missile stocks today is really betting that a rise in their price will come just from the widespread anticipation of future business, rather than from present profits.

Moreover, not all companies that are being tagged as missile stocks deserve the title. Some don't participate at all in missile work; others may have contracts, yet don't qualify as missile stocks. In the table at the right—far from being a complete list—many have been tagged as missile stocks, while only a handful qualify by strict definition.

• **Try to Define**—Wall Street itself is not at all sure which stocks are the missile stocks. Some analysts are plugging big, established firms that have missile contracts; others are fingering small unknown outfits that may someday be major factors in the business.

This confusion is natural, considering the uncertain state of the industry. For example, a good part of the missile business is highly secret, and accurate figures on contracts are hard to come by. Then, too, the missile business is so young that companies that play a major role today may be superseded by others in the near future.

Another reason for caution is that the structure of the industry is not at all firm. Basically, it's now divided into three segments: airframe, fuels, and

These are closest to true missile stocks

1

	Oct. 4 Close	Percent Change During week after Sputnik	Percent Change Oct. 4 to Dec. 16
Aerojet-General	\$215.00	+18.6%	+32.5%
Douglas Aircraft	58.50	— 2.6	+21.8
General Dynamics	46.75	+10.4	+24.6
Lockheed Aircraft	31.00	— 5.2	+17.7
Marquardt Aircraft	21.50	None	+14.0
Martin Co.	27.00	+32.4	+24.1
North American Aviation	20.25	+21.6	+46.3
Sperry Rand	19.87	— 6.3	— 5.6
Thiokol Chemical	57.25	+ 6.6	+21.6
Reaction Motors	26.00	+19.2	+ 9.6

These are among those getting a play, but are basically not missile stocks

2

	Oct. 4 Close	Percent Change During week after Sputnik	Percent Change Oct. 4 to Dec. 16
Boeing Airplane	\$33.25	— 4.5%	+13.9%
Burroughs	38.87	— 4.2	—22.8
Chrysler	74.25	— 2.9	—20.4
Emerson Electric Mfg. ..	25.12	— 0.5	+15.4
Fairchild Engine	7.37	— 8.5	+ 3.4
General Electric	61.37	— 5.3	— 0.6
Int. Tel. & Tel.	30.00	— 6.7	+ 0.8
Kaweck Chemical	27.25	—12.8	—19.3
McDonnell Aircraft	23.50	—14.9	+ 1.6
Raytheon Mfg.	18.87	— 1.3	+15.2
U. S. Borax & Chemical .	41.75	+14.4	+14.4
United Aircraft	61.75	—13.8	—18.2

These, plus some of the above, may be the missile stocks of the future

3

	Oct. 4 Close	Percent Change During week after Sputnik	Percent Change Oct. 4 to Dec. 16
American Bosch Arma ..	\$17.87	— 5.6%	+13.3%
Cook Electric	29.50	— 1.7	—41.1
Garret Corp.	30.50	—10.7	—14.8
G. M. Giannini	11.25	— 2.2	+22.2
Haveg Industries	53.50	—13.1	+ 7.5
Hoffman Electronics	21.87	— 4.0	— 4.6
Hooker Electrochemical .	24.12	+ 2.6	— 0.5
Minneapolis Honeywell .	86.25	— 3.8	— 4.6
Olin Mathieson	44.12	— 5.7	— 9.9
Perkin-Elmer	21.00	— 4.8	— 9.5
Thompson Products	55.75	+ 0.4	—14.8

**If it goes through pipe
anywhere in the world...**



chances are...
IT'S CONTROLLED BY FISHER



A World-Wide Organization of Engineering Representatives

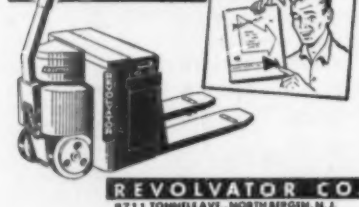
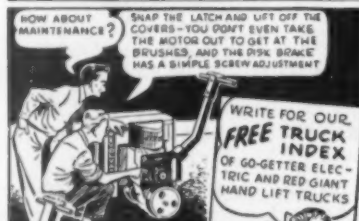
Wherever gases, liquids or steam are to be controlled, engineers specify Fisher controls. More than three quarters of a century of research has developed pressure and liquid level controls capable of meeting today's critical demands.

Fisher controls and engineering services are available through a world-wide organization of experienced representatives. One of these men is available to discuss with you any control problem related to gas, oil, power, chemical, paper or other processing industry.

FISHER GOVERNOR COMPANY

Marshalltown, Iowa
Plants in Canada, Japan, England, Australia

Manufacturers of:
PRESSURE REGULATORS... DIAPHRAGM
MOTOR VALVES and LIQUID LEVEL CONTROLS



REVOLVATOR CO.
8711 TONNELLE AVE., NORTH BERGEN, N.J.

MIT

Dividend Announcement

Massachusetts Investors Trust

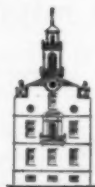
DECLARES ITS

133rd Consecutive Dividend

11 cents a share,
from net income,
payable December
24 to shareholders
of record November
29, 1957.

ROBERT W. LADD,
Secretary

200 Berkeley Street, Boston



WHEN BUSINESS MEN
WANT BUSINESS NEWS
THEY TURN
TO.....



electronics. Today, most companies are in only one phase of the business. As the industry grows, you're likely to see a number of integrated companies come into being.

I. Missile Yardsticks

Despite Wall Street's confusion, some measures of what makes a missile stock do exist. To qualify from the viewpoint of an investor looking for long-term growth, a company must meet three requirements:

- It currently has missile contracts that account for at least 10% of its total sales, and it anticipates an even bigger percentage.

- It is missile-oriented, which means being involved in research and development as well as production.

- It will rise and fall with the missile spending program.

Obviously, these criteria bluntly eliminate some companies that are being billed as missile stocks. Chrysler, for example, doesn't expect its missile business ever to be more than a sideline. General Motors and Westinghouse are in much the same position. Even General Dynamics—which appears to be well on its way toward becoming a missile stock because of the contracts held by its Convair Div. and because of its acquisition of Liquid Carbonic, a producer of liquefied gases—is much more involved in other areas than in missiles.

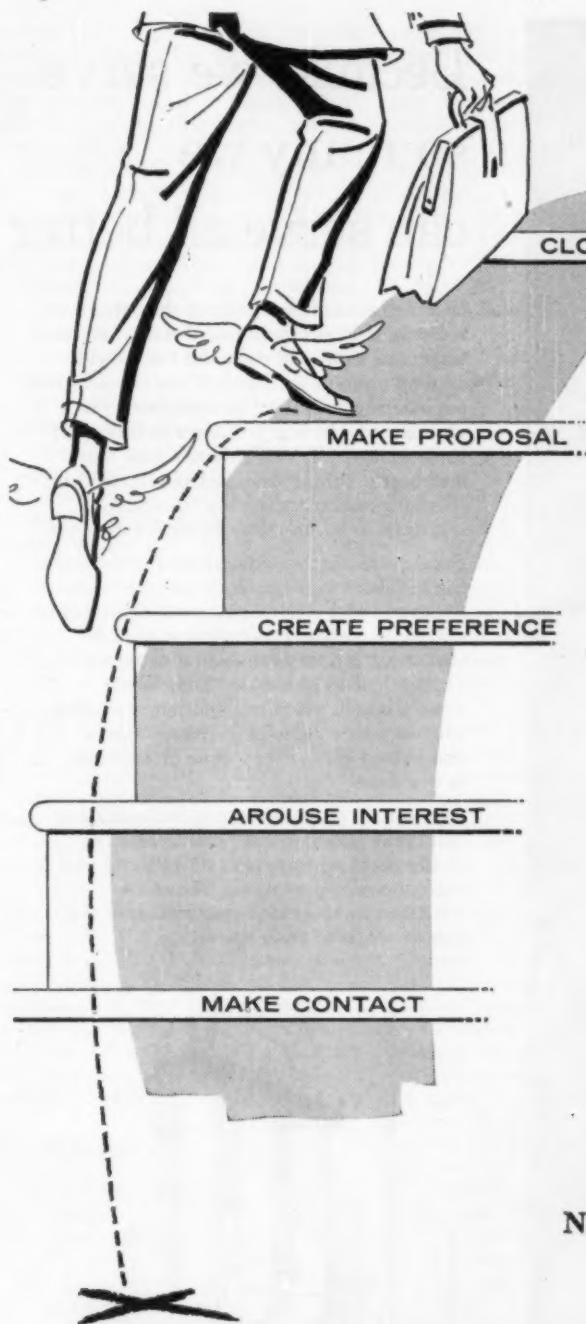
- **Best Chance to Grow**—This does not mean that the big outfits will not be major factors in missile business. They will continue to get a good part of the available contracts. And some of them may one day decide to concentrate on missiles. But if big money is made in missiles, it will undoubtedly be made in small companies whose growth is wholly dependent on missiles.

That's the nature of a budding industry. It leans heavily on mature companies that have resources and skill. But as the industry grows, the companies that show the biggest growth will be those that have concentrated in the field.

II. Big Names

Of the companies now in missiles, Aerojet-General Corp., whose stock is traded over the counter, is an extreme case of the missile stock. From a modest \$2.5-million in 1946, its sales have zoomed to about \$162-million this year—almost wholly from missile work. In addition to tracking down commercial uses for the rocket, the company has been pushing development work in both liquid and solid propellant engines.

Aerojet is a subsidiary of General Tire & Rubber Co., which owns 87% of its shares. Investing in General Tire



CLOSE THE ORDER

Put

YOUR Salesmen

3 Steps Ahead

Every step in industrial selling is important—so important that you can't skip any of them and still get results.

You can, however, take the first three steps by means of *advertising*. A well-balanced industrial advertising program can "make contact," "arouse interest" and "create preference," giving your salesmen a three-step lead so they can concentrate on the steps which require personal selling—"making the proposal" and "closing the order."

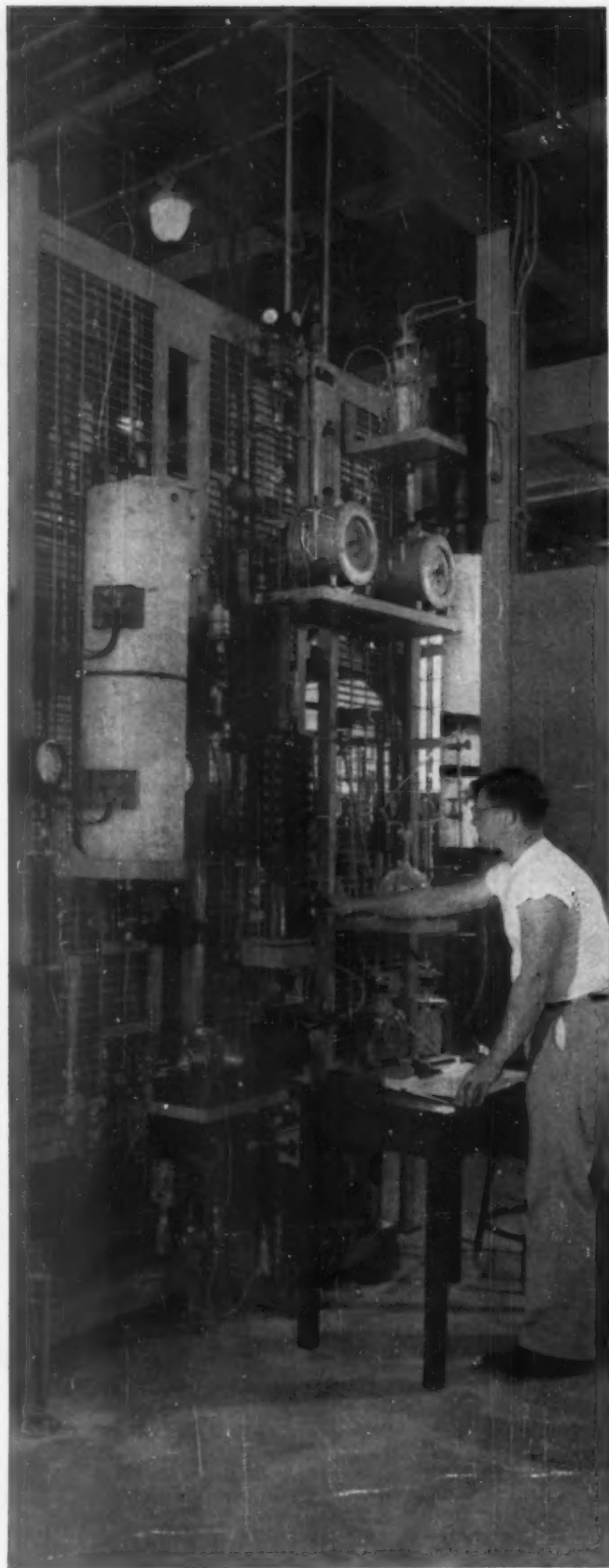
With effective advertising, cost per call goes down and sales per call go up, for advertising puts more sales in every salesman's day.

**NATIONAL INDUSTRIAL ADVERTISERS
ASSOCIATION, INC.**

271 Madison Avenue, New York 16, N. Y.



An organization of over 4000 members engaged in the advertising and marketing of industrial products, with local chapters in ALBANY, BALTIMORE, BOSTON, BUFFALO, CHICAGO, CLEVELAND, COLUMBUS, DALLAS-FORT WORTH, DENVER, DETROIT, HAMILTON, ONT., HARTFORD, HOUSTON, INDIANAPOLIS, LOS ANGELES, MILWAUKEE, MINNEAPOLIS-ST. PAUL, MONTREAL, QUE., NEWARK, NEW YORK, PHILADELPHIA, PITTSBURGH, PORTLAND, ROCHESTER, ROCKFORD, ST. LOUIS, SAN FRANCISCO, TORONTO, ONT., YOUNGSTOWN.

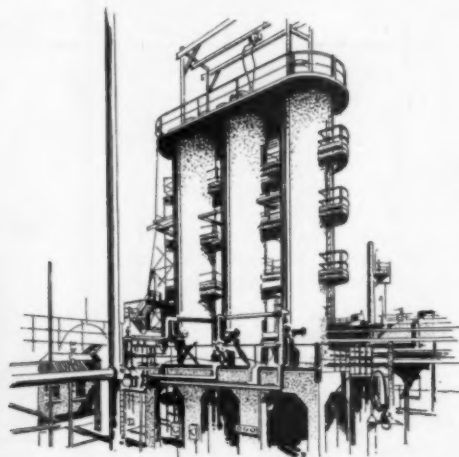


Because we serve so many we can serve all better

UOP has a lot of customers in the petroleum refining and petrochemical fields. Refiners large and small, all over the free world, depend upon us for much of the research and engineering they need to keep products and manufacturing processes in line with the constantly growing demand for more and better things from petroleum. Serving so many customers is a big advantage, not only to us, but also to each customer.

Because of our breadth of operation across the industry we are able to provide the finest research and engineering available in petroleum refining technology, a staff that most refiners would find economically impractical to assemble. Too, in our more than 40 years of experience working with so many refiners we have faced and solved most every type of problem in our field.

As a result we have been able to develop and make commercially practical many of the most widely used oil refining and petrochemical processes. These are available to all refiners regardless of the size or scope of their operation.



**UNIVERSAL OIL PRODUCTS
COMPANY**

30 Algonquin Road, Des Plaines, Illinois, U. S. A.
More Than Forty Years Of Leadership
In Petroleum Refining Technology

provides some participation in the missile business, for Aerojet is responsible for about 29% of its total sales volume. But it is doubtful that General Tire itself will ever rank as a missile stock.

- **Aircrafts**—There's more likelihood that some aircraft companies will become full-fledged missile stocks. But it's a mistake to equate aircraft automatically with missiles. Today, few aircraft companies are important missile producers, mainly because they don't have the financial resources or the technical background to go full-blast into the missile field.

The aircraft company that is deepest in missiles is Martin Co., with 60% of its sales and backlog in missile work. Douglas, which is a prime contractor on two major missile projects and is doing development work on a number of other component parts, is another that appears to rank as a missile stock. So is Lockheed, which expects to increase its missile work force to more than 7,000 in 1958. Moreover, each of these companies is talking about merging with or forming an electronics company to buttress its position in missiles.

- **Fully Qualified**—Rounding out the list of true missile stocks are North American Aviation (its Rocketdyne Div. is deeply involved with the military program); Marquardt, maker of ramjets, which is 25% owned by Olin Mathieson Chemical; Thiokol Chemical, a solid fuel propellant manufacturer; Reaction Motors, a fuel and hardware maker linked with Marquardt and Olin Mathieson in the OMAR program, and a borderline case, Sperry Rand.

Sperry, although it can't count its missile sales volume as too great a chunk of its over-all total, has at least 20 missile contracts, and is regarded as a potential candidate.

III. Related Companies

There are also a number of small outfits, especially in the electronics field, that appear on the surface to rate as missile stocks. Actually, though, a good number aren't participating in the missile program as much as their Wall Street admirers have suggested.

- **Chancy Business**—Some of these electronics companies may be producing missile parts on fat contracts. But once these contracts are fulfilled, the companies aren't sure there will be others. The companies that are heavy on research, with a lot of work on the drawing board or in development, may be better off in the long run.

In the electronics end, too, the industry giants are getting more and more involved in missile work and will garner a good share of future business. But that does not mean that the giants can yet be labeled as missile stocks. To such

companies as General Electric, Burroughs, and International Telephone & Telegraph, the missile portion of their total business is small potatoes. American Telephone & Telegraph's revenues in 1956, for example, were more than twice the total sales of the entire missile industry.

There are scores of other companies that don't belong in the missile stock category for much the same reasons. Litton Industries and Consolidated Electrodynamics, for example—two companies that are being touted as missile stock finds—don't have a major portion of their volume in missile business.

IV. A Lot of Guesswork

Once you define a missile stock, how good is one, anyway? Judging by the jumps most have made since Sputnik, you'd think they were sure bets. But the answer is not so simple. Just as each stock group must be considered apart from the over-all market (BW-Dec.14'57,p154), so must individual stocks—even missile stocks—be studied apart from their groupings.

Today's missile program opens the door to numerous investments. Searching out space will mean new types of aerial cameras and film, atmospheric instruments, electronic circuits, and greater use of lighter metals. The potential is high. In 1951, the missile industry registered \$21-million in sales. In 1956-57 fiscal year, sales came to \$2.5-billion—a 10,000% increase. And it's still just the beginning—not even touching space platforms, commercial rocketry, and more highly developed military missiles.

- **Confused Picture**—However, the impact of expanded missile activity on individual companies is a little harder to assess:

- The over-all military missile and satellite program is still uncertain. It will expand, but budgetary pressures, technical problems, and even political favoritism will tend to limit it.

- Among individual companies, many important details about the volume and type of contract are still secret.

- Programs always are subject to cancellation. And research projects—which could be the germ of a company's growth—may be abandoned before they reach production-line status.

With all this in mind, it's only common sense that an investor be wary before choosing missile stocks for his portfolio. Besides, he doesn't have an accurate guide in any of their earnings statements. The missile industry, like many another government-primed industry, has worked mostly on a cost plus fixed fee basis during its early stages. Historically, this means low profit margins, averaging about 5%

after taxes. On research and development contracts, the profits may be even less.

But it's clear that an investor must look beyond immediate yields. "When you're investing in missiles," says one investment counselor, "you're investing in the Space Age. You've got to look for the big gain."

V. Space Age Sleepers

If you accept this philosophy, there are several types of companies that could readily benefit from missiles expansion.

One is the chemical company that's working with high energy fuels. Some specialists predict that missile fuels will reach \$1-billion sales 10 years hence. And a wad of companies hope to get a bite of that lush market. Among those active in the field are Olin Mathieson, Hooker Electrochemical, Foote Mineral, and Callery Chemical, a subsidiary of Mine Safety Appliances Co.

Electronics companies may also be future missile stocks. Most likely, it will be the electronic company that's now involved in research rather than the one that's producing missile parts. For technology in missile electronics is changing rapidly, and obsolescence is sure to come quickly. Thus, a company such as Garrett Corp., working with high-altitude technology, has a good chance to rate as a future missile stock.

- **Someday Leaders**—And you also have to look at the over-the-counter market for the "sleepers"—the stocks that may someday emerge as giants. Among these are Cook Electric, studying inertial guidance and the re-entry problem; Perkin-Elmer, which is involved in optics and infrared instruments, and G. M. Giannini, already with about 40% of its total business in missiles. They all have the potential to shoot ahead in the field.

Among other companies that could develop into big factors is Haveg Industries, basically a plastic maker, which has made inroads into the missiles business with new materials that can withstand terrific frictional heat.

Then there is Thompson Products, owner of half the stock of Ramo-Wooldridge Corp., which has the job of supervising and coordinating the Air Force's ballistic missile program. Ramo-Wooldridge is expanding and, under a complicated arrangement, Thompson will eventually take full control; still, Thompson Products is essentially an auto and airplane parts maker, and it would take a big shift to lift them into the missile stock category.

Another may be Fairchild Camera, on the American Stock Exchange along with Thiokol, which has about a dozen missile contracts. **END**

In the Markets

• • •

Chances for a Yearend Stock Rally Fade As Tax Selling Continues

There was still no sign this week that the stock market would stage its traditional year-end rally.

December rallies are standard operating procedure in Wall Street, mainly because the end of the tax selling period is normally followed by a splurge of buying. But this year it appears that tax selling is not only going on later than usual but is also in larger volume (BW—Nov. 16/57, p166). Each time the market has rallied, a new wave of tax selling has emerged to send stock prices skidding once more.

Tax selling is not, of course, the only factor in the current market. Even though the market anticipated a readjustment in business, the news of increasing unemployment and decreasing production is creating still further doubts about the level of stock prices. And some of the stocks that climbed the highest are now taking the worst beating.

Both steels and autos this week hit new lows. This may appear logical in view of the slower business in both areas, but many analysts feel that their prices are more depressed than their prospects warrant. For example, Republic Steel this week sold at \$38, off more than \$21 from its high, and U. S. Steel was at \$48.67 compared to a peak of \$73.50 earlier this year.

It is clear, though, that the whole market—and not just particular groups—is weak. In the first two days of trading this week, there were only 11 new highs, but 281 new lows. The Dow-Jones industrials average dropped to 425.65, the lowest since it hit the year's bottom on Oct. 22. And the more comprehensive Standard & Poor's 500-stock average, which hit 39.42 this week, is also just above the year's low of 38.55.

Since the Dow-Jones average was well over 440 when December began, it would take a really sustained effort to better it in the next few days.

There is much more likelihood that the market will be testing its old lows. Yet just as each rally has been turned around by widespread selling, each time the market gets within sight of its lows, widespread bargain buying shows up.

• • •

Bond Prices Continue Fast Rise, But Testing Point May Come Soon

While the stock market was under pressure, bond prices this week continued to show strength.

The past month, in fact, has seen government bond prices rise more swiftly than in any comparable period since the 1930s. And both corporate and tax-exempt municipal bonds have registered big increases.

A number of banks and institutional investors have been raking in huge profits.

The strength and swiftness of the rise in bond prices may be in for some early testing. For one thing, bond yields have fallen sharply, and that may cool buying sentiment. For another, the extraordinary advance makes bonds technically vulnerable.

But even if they fall back somewhat, the bull market in bonds looks solid. The fact is that investor sentiment is growing increasingly bearish, and the weakness in the stock market is adding to the strength of bonds.

Moreover, the Federal Reserve is likely to take new steps toward easier credit soon.

• • •

Cut in Margin Requirements Now Seems to Be in Cards

Apart from its general easing of credit, will the Federal Reserve move to reduce margin requirements?

Evidence is building up that such a step may be coming. Customers' net debit allowances outstanding—the amount of credit extended by brokers to margin accounts—totaled \$2.5-billion at the end of November, the lowest since early 1955, when the Fed increased margin requirements, first from 50% to 60%, then to the current 70%.

Customer borrowings have been declining since June, when they amounted to \$2.9-billion. During the bull market, increasing use of customer credit helped send prices up; now, as borrowing slacks off, the loss of buying is adding to the downward pressure.

• • •

Mutual Funds Still Find Buyers, But They Don't Rush In So Fast

Investors are still making heavy purchases of mutual funds, according to the National Assn. of Investment Companies, but the decline in the stock market is having an effect on both sales and redemptions. In November, purchases amounted to \$100-million, down from \$135-million in October and \$113-million in November, 1956. Redemptions of \$28-million were below October's \$35.6-million but slightly ahead of the \$27.5-million cashed in November last year.

• • •

Uranium, Once Pet of Investors, Now Has Few Friends in Market

Uranium stocks, an investment pet in 1956, are now in the doghouse. The increase in supplies of uranium, coupled with the fear that long-term utilization may not measure up to expectations, has hit the entire range. Most uranium stocks are selling well below their peaks—Northspan is down to \$3 from a high of \$9.50; Stanrock is selling at \$2, down from \$5.30; Kerr-McGee sold for under \$42 this week compared to a peak of \$75.75; and Atlas Corp., which has heavy uranium holdings, is down from \$11.75 to \$6.50.

thanks to
**automatic
xerography**



*push the button
and copies flow!*



Stromberg-Carlson's Model 5000 electronic printer, incorporating the Charactertron® readout tube (below) and the Xerox Copyflo continuous printer, was shown for the first time at the recent Eastern Joint Computer Conference, Washington, D. C.



XeroX® Copyflo® Continuous Printer...fast...clean...versatile...economical...
copies from microfilm or original documents at 1200 feet an hour

The dry, xerographic method of instant copying truly fills the bill in handling the tremendous output of the Stromberg-Carlson Charactertron® readout tube which can pour out 10,000 characters a second—5,400 printed pages an hour. (See Stromberg-Carlson advertisement this issue.)

Commercial models of the Copyflo con-

tinuous printer are providing an invaluable boon to companies requiring the copying of hundreds—or thousands of different items.

The Copyflo continuous printer turns out beautifully clear, right-reading prints —4 to 11 inches wide and each precisely like the original—on plain, unsensitized

paper, transparent vellum or offset paper masters, at the rate of 20 feet a minute. This is the equivalent of a full 8½" x 11" copy every two seconds. For details, write Department SC-10, The Haloid Company, Rochester 3, N. Y. Branch offices in principal U. S. and Canadian cities.

Ideal for:

- **Insurance Companies:** policy applications, medical forms, history record cards.
- **Industrial Companies:** engineering drawings, letters, parts and inventory lists, security records, contracts, specifications.
- **Title Companies:** titles, abstracts, etc.
- **Transportation Companies:** waybills, correction statements, statements of difference, tracers, claims, ICC copies, government regulations.
- **Banks:** checks, statements, facsimile signatures, reports.
- **Commercial Reproduction:** a new, low-cost reproduction service of many applications.

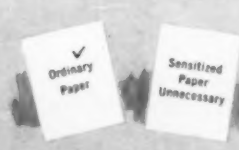
**HALOID
XEROX®**



Copy 1200 different documents per hour—a print in about 2 seconds.



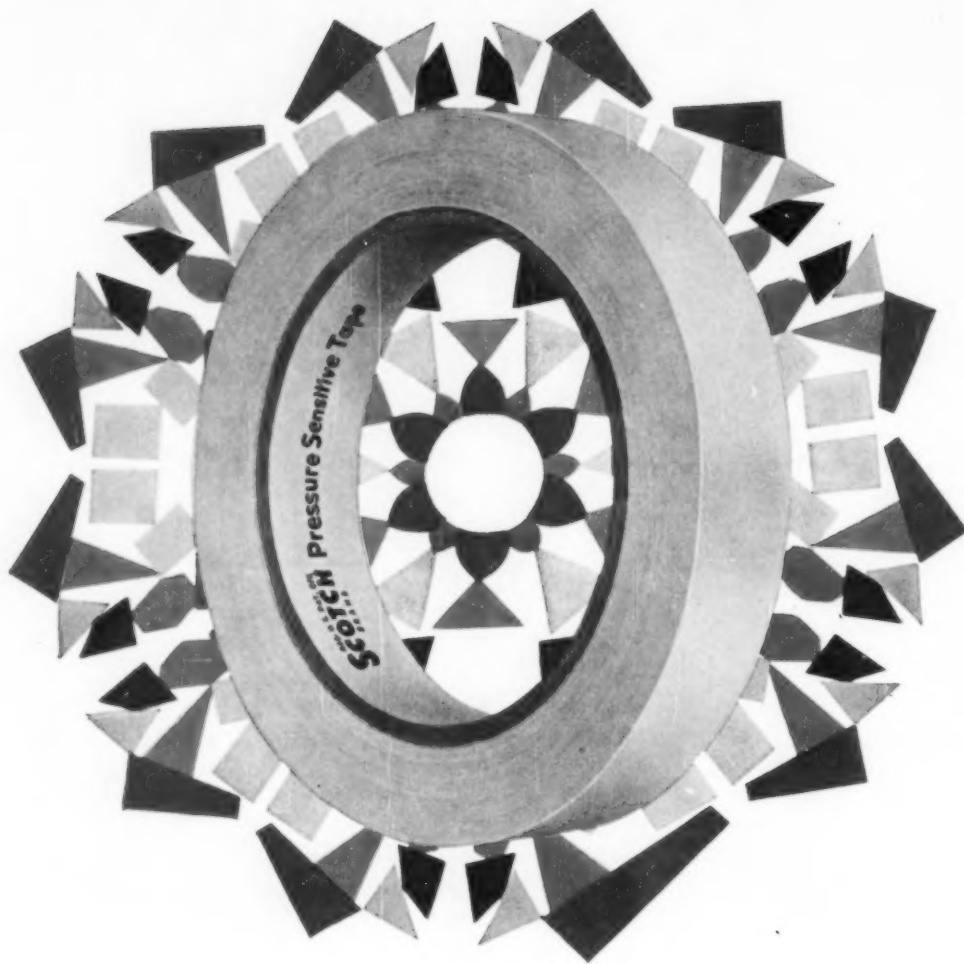
Each copy precisely like the original, reduced, enlarged or same size.



Made on ordinary unsensitized paper, vellum or offset paper masters.



Low cost—proven savings to 70% ... as much as \$100,000 a year.



Now "SCOTCH" Brand Tapes in all these colors!

Colors roll on *dry* with "SCOTCH" Brand Pressure-Sensitive Tapes. Think what you can do with the over 4,000 possible color combinations using the brilliant colors shown. Color coding, labeling, decorating, banding, joining—there's virtually no end to the list!

Jobs are easy, fast and clean—with tape. And you get the *same* color with "SCOTCH" Brand—roll after roll. It's printable, too!

So next time you think of color, *think tape*. And when you *think tape*, think "SCOTCH" Brand—and stick with it!

COLORED TAPES... among the more than 300 pressure-sensitive tapes for industry, trademarked...



The term "Scotch" is a registered trademark of Minnesota Mining and Manufacturing Company, St. Paul 6, Minn. Export Sales Office: 99 Park Ave., New York 16, N. Y. In Canada: P.O. Box 757, London, Ontario. ©3M Co. 1957



PERSONAL BUSINESS

BUSINESS WEEK

DEC. 21, 1957

A BUSINESS WEEK

SERVICE

You'll be hearing a lot more about condemnation of private property in the next few years, as the 41,000-mi. national highway program picks up speed. You may even find yourself involved in a condemnation proceeding. Before that happens, you may want to know something about the procedure—and some special federal tax rules that apply.

The routine varies, but, generally, you follow these main steps when a state or local government condemns your land:

- First you get a formal condemnation notice. The "public purpose" for which your land is needed will be explained, and you'll be alerted that a court (or special tribunal) hearing will be held on a certain date—probably within two or three weeks. (At this point, if you anticipate trouble, you'll want to call in an attorney.)
- At the hearing, you'll have an opportunity to avoid the condemnation by showing that no valid "public purpose" exists. Chances of this happening, though, are slim. Usually the court will approve the condemnation, and you'll be asked by the condemning agency to discuss privately the question of compensation.
- A price will be offered by the agency—subject to some informal bargaining on your part. If you refuse the final offer, you'll be asked to appear at another court hearing—probably within two or three months, depending on the urgency of the public project.
- The second hearing will determine property values, often with the aid of court-appointed appraisers. The condemning agency, of course, will call in real estate experts to support its case—and you'll have a full opportunity to do the same. Here's where careful groundwork laid by a skilled condemnation attorney can prove valuable.
- Appeal is possible, but generally, you have little chance of upsetting a lower court's final determination of value.

If the value finally settled upon leaves you with a profit, you would, of course, be subject to a capital gains tax—maximum rate 25%. However, you can sidestep this tax if you use the proceeds to buy another house within a year following the year of sale. The second house must cost at least as much as what you received for the old.

If your net proceeds are \$60,000, for example, and your profit is \$10,000, you pay no tax if the new house costs \$60,000 or more. But if the new house costs just \$55,000, you would report a gain of \$5,000.

If you find that you can't suitably replace the condemned property within one year following the year of sale, you can write to the Treasury and ask for more time. Usually, you'll get a "reasonable" extension—maybe one month, maybe six months. There's no close rule on this.

The time limit itself works both ways. You may find a good "buy" long before your old property officially is condemned. If this happens, the Treasury will let you make your new investment in advance, but the new property must still be in your name, unsold, on the date of condemnation.

Just advancing money to contractors for a new house isn't enough. You must have a finished building. Occupancy, though, isn't necessary.

There's a strict rule on replacement of business property that sometimes causes trouble for the owner. Say you own an apartment house, for investment, and it's condemned. You'll lose your exemption from tax on the gain if you replace it (even within the time limit) with, say, a rental garage. The

PERSONAL BUSINESS (Continued)

BUSINESS WEEK
DEC. 21, 1957

replacement property—and this would include a single residence, if rented—must be “similar in use.”

If just a strip of your land is condemned, usually you get a total award that actually amounts to (1) compensation for the condemned part, and (2) “severance damage” to the part remaining. Here your best bet is to have the award clearly split into the two parts, as a matter of record. This way, you avoid any chance of being taxed on severance damage—and pay tax only on any profit realized from the condemned strip.

But there's a drawback to keep in mind: Your severance damage reduces the cost basis of your remaining property (for tax purposes)—so if you sell in the future, you're apt to have a higher capital gains tax.

There's always a chance, obviously, that condemnation will produce not a profit, but a loss. Here you run into a tough tax rule if the condemned property is your personal residence: You can't deduct the loss as you do in the case of a casualty loss from fire, flood, storm, etc.

You can deduct the loss, though, if it's income-producing property of any kind.

It's still not too late to get accommodations for a vacation trip to the West Indies during the peak season, which runs from Jan. 20 to Mar. 1. Bookings even can be made for dates in advance of this rush period. And, in both cases, rooms are available at some of the top hotels in the islands. Recent political upheaval on several of the islands (particularly Haiti)—causing some tourists to shy away from the Caribbean—apparently is the reason why it's a little easier this year to make reservations at the last minute.

Although you probably won't find many large group accommodations still available for the cruises, if you act fast you still may be able to pick up a canceled reservation for an isolated berth in the top price range.

And, while you may have difficulty getting flight space, the situation has improved somewhat compared to last year. Many of the airlines that service the Caribbean have stepped up the frequency of their flights during the next two months, and a couple have added larger DC-7s and Viscount turboprops to handle the late-planners.

The price you pay for your trip may be a trifle higher this year, due partly to increased air fares. A complete island-hopping tour of about 10 days including air fare, hotel, meals, and sightseeing will now run around \$232 roundtrip from Miami, and \$332 roundtrip from New York. After Mar. 1, the cost normally drops about 10%.

If you're looking for a fine holiday punch recipe, here's an outstanding original from New York's Cafe Chambord: Use one bottle of cognac, six bottles of champagne, one half bottle of Grand Marnier; also two cups of sugar and sliced fruit—orange, lemon, cherry, lime to garnish. Stir in an iced bowl. Serves about 25.

For young readers, a last minute suggestion: The Golden Book of America, by Irwin Shapiro (Simon & Schuster, \$4.95). Latest edition is a lively 200 pages for kids—full of stories of America's past, from Daniel Boone to the building of Brooklyn Bridge. With 300 pictures in color.



Royal Cutting Boards



CHEF'S SPECIALTY...

4300 Meals a Day across the Boards!

That's what is served in the three main restaurants and coffee shop of New York's mammoth Hotel Roosevelt. "Everything in our kitchen must work at top efficiency", says the chief steward. "That's why we've switched over to U. S. Royal Cutting Boards. They do not warp, nick, splinter or chip and they do not dull the knife blades. Just about every particle of food we serve comes across the U. S. Royal Cutting Boards. This constant traffic of different foodstuffs is no problem, because U. S. Royal Boards are non-porous, do not retain any stains or juices."

Leading hotels, restaurants, hospitals, industrial cafeterias and major meat-packing houses use U. S. Royal Cutting Boards. They are easy to clean—you can wipe them clean with a damp cloth. U. S. Royal comes in many sizes, is light in weight, has a non-skid work surface, and *outwears* any other type of food board.

Obtainable at any of the 28 "U.S." District Sales Offices, at selected distributors, or contact us at Rockefeller Center, New York 20, N. Y. In Canada, Dominion Rubber Co., Ltd.



Mechanical Goods Division

United States Rubber

Teaching

New Haven school starts them on way to being chefs—a field with more jobs than skilled men.

The average Yale graduate can expect to earn about \$4,800 a year on his first job. Just off the Yale campus, though, is a small school whose graduates do better than that. After only two years in class, they command starting salaries of \$6,000 to \$8,000.

Pictures showing the students boning up for mid-term exams suggest that the curriculum is far different from the liberal arts and sciences the Yale man studies. Indeed, the studies and examinations revolve around concocting such things as crepes suzette and fancy sauces.

The school is the Culinary Institute of America, with an enrollment of 200 students and a faculty of 12 leading American and European chefs. It boasts of being the only top-flight U. S. school exclusively to develop chefs. The school occupies six buildings on a 10-acre campus next door to the Yale Divinity School. In July and August, it will hold its first summer session, taught by master chefs and open only to chefs and cooks who have at least five years professional experience.

• **Out of Khaki**—The Culinary Institute started modestly in 1946 as a local effort to train war veterans for chef and steward jobs that were going begging. It soon advanced far beyond the original aim of teaching former GI cooks to leap the gap between C-rations and T-bone steaks, though even its most ardent sponsor wouldn't have dreamed it would become what it is today—the American equivalent of the Cordon Bleu, famous French school for chefs.

With so much emphasis these days on scientific training, the fact is often overlooked that professional chefs are already in extremely short supply and are getting rarer all the time. Rigid immigration rules cut the number of European-trained chefs coming into the U. S.; meanwhile, the average age of top chefs in this country is in the early 60s.

The American Culinary Federation, made up of 14 chefs' associations all over the country, counts only 4,700 members, yet receives at least three times that number of top job offers. This shortage has been worrying the food and restaurant business for years. It's one reason why companies, including such blue-ribbon names as General Foods, Hotpoint, and Waring, contribute around \$36,000 a year in cash and



MEN IN WHITE display the makings of a full-course dinner, lacking only soup and nuts. Front to back: canapes, lobster, steak plate, two fish dishes, parfait, and cookies.

Men Their Place in the Kitchen



BAKESHOP specialists add decorative topping to trays of tarts, as part of regular classwork at the New Haven school.

MIRROR at front of classroom lets future chefs look over shoulder of their instructor as he demonstrates recipes.



MEAT-CUTTING is taught in a tiled room converted from a coal bin. There's an art to getting the choice cuts most economically.

TASTING is a chef's one sure way of keeping track of how well he is doing. Here a student cook samples soup stock.



FEW WOMEN take the course. Mrs. Roth (right), director, talks to one of them.

equipment to underwrite the Culinary Institute.

• **Modest Start**—In 1946, the New Haven Restaurant Assn. listed 200 well-paid chef and steward jobs that could be filled by local men if the training could be made available. Meanwhile, Connecticut veterans were looking for just such training.

The association asked Mrs. Frances L. Roth, a New Haven lawyer, former city prosecutor, and Yale Law School professor, to help set up a training program. And it lent \$8,000 to get courses under way in modest quarters in downtown New Haven, with an initial enrollment of 55.

"It started out as a favor—a small short-term job," says Mrs. Roth. "Now, 11 years later, here I am with a campus."

The school moved to its present home a few years ago, when gifts helped it buy the Thomas Wallace estate. Students nowadays come from all over the country, with a majority from the Midwest, as well as from as far as Alaska, the Philippines, and Liberia. They average 22 years of age, have a high school diploma or its equivalent—and have a liking for food.

• **Gaining Prestige**—Part of the school's mission is to raise the professional status of chefs and cooks in the U. S. Mrs. Roth and her staff learned early that American men hold chefs in lower esteem than Europeans do, and are discouraged from entering the profession by the long apprenticeship—at least eight to 10 years.

The school brought glamor to its faculty by engaging well-known chefs as instructors, and it shaped its two-year courses to accelerate the apprenticeship before a man can don the 140-pleat chef's hat.

The Culinary Institute has even won recognition from the Yale students,

who at first resented the placing of a "trade school" on the edge of their campus. Student chefs do a thriving part-time business—also a practical piece of homework—in baking birthday cakes, elaborately decorated with the college crest, for Yale students as gifts from their families. The Institute also prepares and serves juicy boneless steaks for the Yale athletic training tables, including the football team.

The Culinary Institute turns out "roundsmen," who can handle any of several cooking stations, and men who are well on their way to becoming pastry and salad chefs and sous chefs (under-chefs, the operating chiefs of the kitchen). They find employment both here and abroad in industry, hotels, and restaurants. Some graduates with managerial training have become executive chefs or set up businesses.

• **Career Prospects**—After only one year of training, students are in great demand. Hotels, restaurants, and industrial companies send scouts with job offers in the \$5,000 range and promises of \$6,000 or more after a year's experience. The top one-third of the class, however, usually continues another year in the Advanced Chefs Training Course. After that, they can step into positions at \$6,000 to \$8,000 a year.

A two-year graduate may look forward to earning \$15,000 a year after, say, 10 years in commercial kitchens, and the best of them, with managerial training and European experience, may even reach \$25,000 or \$30,000.

Each 36-week term costs the student \$1,000 for tuition, Continental breakfast, a seven-course midday dinner five days a week, and culinary textbooks (the Institute has written its own manual to replace the famous Escoffier cookbook in its classes). Another \$300 or so covers a dormitory bed, uniforms, and tools of the trade.

Even first-year students can earn most of this money by part-time work in New Haven restaurants at \$40 to \$60 a week. Fully 90% of the students work their way through the school, gaining practical experience, too.

• **High Living**—Probably no other student body is so well fed. Students prepare, analyze, and criticize the seven-course midday meal, learning how to prepare London broil with Bordelaise sauce or Rock Cornish Game Hen most economically and tastefully for 200 diners at a sitting. About once a week, industry guests join the faculty and students at this dinner.

Under the teaching of chefs like Theodore Baun, for many years Sous Chef at the Boston Statler Hotel; Aldo Graziotin, formerly in London as Chef Garde Manger at Brown's Hotel and Chef Saucier at Cafe de Paris; Louis Bartenbach, a graduate of the Culinary School in Berne, Switzerland, and John

Griffin, one of the Institute's own graduates, the student chefs learn both by watching and by doing. And they learn to eat their own mistakes.

They learn precision in following recipes. "There's a great difference in the size of eggs," Chef Graziotin (picture, page 121) warns them. "So we take one cup of eggs. Sometimes you'll need four, sometimes five eggs—but remember, one cupful."

"I tell them to make mistakes—as many as they have to," says Chef Griffin. "It's better that they do it now, when I can show them what they're doing wrong. Of course, they can tell that something is wrong by tasting, but a chef mustn't guess."

• **Multi-Specialties**—The school stresses a basic knowledge of many related areas and more than one specialty dish for each student. By the time a student completes his basic one-year course, he has helped prepare at least 45 different menus for the daily seven-course meals and has taken courses in meat-cutting, nutrition, menu-planning, food inventory and cost control, service, sanitation, safety, with a garnish of innkeepers' law, contracts, and insurance procedure.

And, last but not least, is a course in drink "mixology." (Here again, the theme of never guessing is echoed but, unlike the kitchen practice, tasting is taboo.)

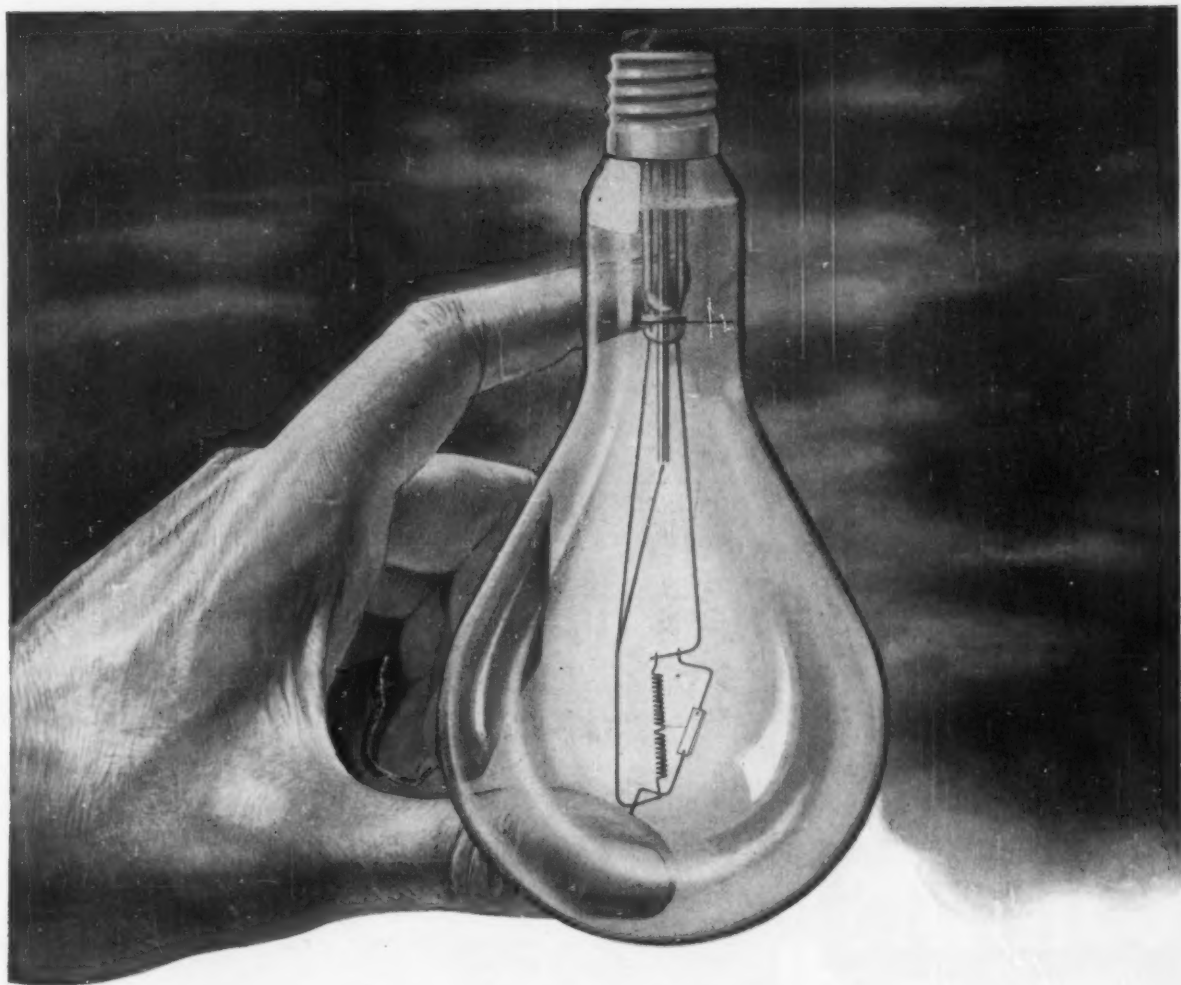
• **Advanced Artistry**—In their second year, students learn to be roundsmen and also the finer points of such specialties as baker, garde manger (canapes and buffets), and saucier. These students usually have particular creative ability and imagination. They want to learn the essential difference between being a chef and being a cook.

When their imagination goes into play, Mrs. Roth has learned to expect almost anything from these student chefs. "One student recently insisted on serving octopus," she recalls.

"I enjoy working with food," says a typical second-year man, "but I want to know more than just enough to get by. When you're chef, you're boss of the kitchen, and there are lots of famous kitchens, in interesting places, that need good chefs."

Final exams for the second year include the selection, ordering, and preparation of food for a meal of the student's choice, as well as answering such questions as "What is the composition of mirepoix?" (a mixture of vegetables with herbs to supplement meat or fish) and "What is a gastric used for?" (an acid that adds sharpness to neutral sauces).

Yet ask any married student chef, who does the cooking at home, and he'll invariably say: "My wife. I'm tasting food all day—besides, she's an excellent cook." **END**



**Newest Sylvania design for filaments
brings you up to 8% more light at no increase in cost**

On the surface, it's the same lamp you've always bought . . . same shape . . . same wattage . . . same price. But, inside the new 120-volt Sylvania coiled coil-filament lamp you'll find the new twist that offers you up to 8% more light—up to 17% more light over the life of the lamp—at *no* price increase over standard lamps.

MORE COMPACT FILAMENT

Secret of this new output is the axially mounted coiled coil which incorporates the same length of tungsten wire as standard filaments in a coil that's considerably shorter. This compact filament conserves light by reducing heat dissipation—reduces bulb blackening.

REDUCES BULB SIZES

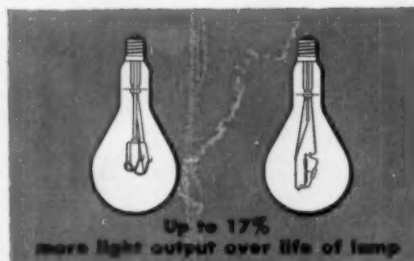
Sylvania's newest filaments have permitted a slight reduction in bulb size in two important wattages. The new 500-watt and 300-watt lamps have been reduced in size as much as 16%.

For details on this new lighting bargain from Sylvania, contact your Sylvania supplier or write:

SYLVANIA ELECTRIC PRODUCTS INC.

Lighting Division, Dept. 7L-1412
60 Boston Street, Salem, Mass.

*In Canada: Sylvania Electric (Canada) Ltd.
Shell Tower Building, Montreal*



**Up to 17%
more light output over life of lamp**

HERE'S ONE REASON WHY

Old-style filament evaporates tungsten over a wide area, blackening a large portion of bulb.

New coiled coil reduces filament area, decreasing heat loss and localizing blackening effect.

SYLVANIA . . . fastest growing name in sight!

LIGHTING • RADIO • ELECTRONICS • TELEVISION • ATOMIC ENERGY

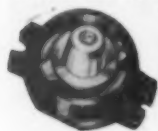


Motors with KLIXON Protectors Usually Need Only Minor Repairs — Says Electric Motor Repair Company

SARATOGA SPRINGS, N. Y.: Mr. Joseph Ovseovich, who owns and operates Joe's Electric Motor Service, knows the value of Klixon Motor Protectors and how they prevent motor burnouts. Here's what he has to say:

"In my experience, a motor to be rewound is more of an accommodation to my customers. When a motor comes in with a Klixon Protector on it, it's usually for minor repair — and my profit is better on that type of repair."

KLIXON Protectors are built into the motor by the motor manufacturer. In refrigerators, oil burners, washing machines, etc., they keep motors working by preventing burnouts. For increased customer-preference, reduced service calls and minimized repairs and replacements, ask for equipment, with KLIXON Protectors.



Manual Reset

Write for the new free informative booklet, "The Story of the Spencer Disc."

METALS & CONTROLS CORPORATION
Spencer Thermostat Division 3612 Forest Street, Attleboro, Mass.

OUTLASTS

Ordinary Brushes

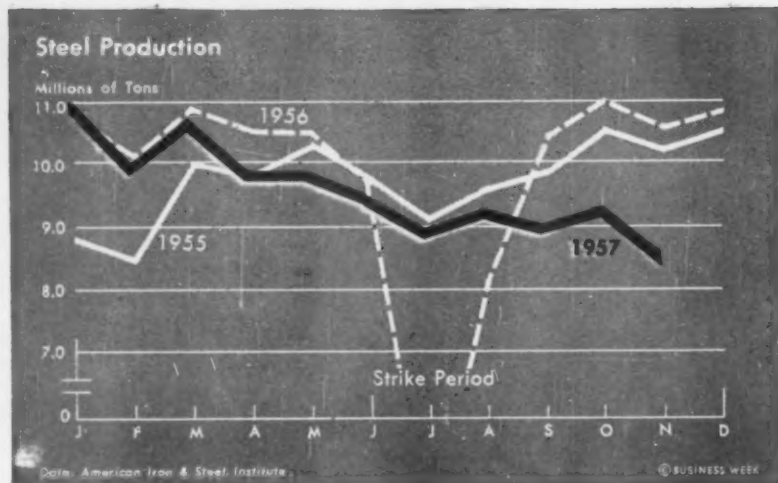
3 to 1

Speed Sweep
The brush with the steel back

27 Styles and sizes to choose from — fully guaranteed. Write today.

M D MILWAUKEE DUSTLESS BRUSH CO.
530 N. 22nd St., Milwaukee 3, Wis.

CHARTS OF THE WEEK



Steel Hits a Disappointing Low

Steel ingot production fell in November to a low for the year, and there are indications it will drop further in December. November production was the lowest for the month since 1954.

In recent weeks output has dipped below 70% of capacity. Steelmen had been more optimistic about fourth-quarter production, but the rise in de-

mand they had expected never materialized. The disappointing level of orders indicates that users are living off their inventories.

Production for 1957 now seems likely to fall below last year (which was adversely affected by a strike) by around 2-million tons. That will still make it the third highest year of all time.

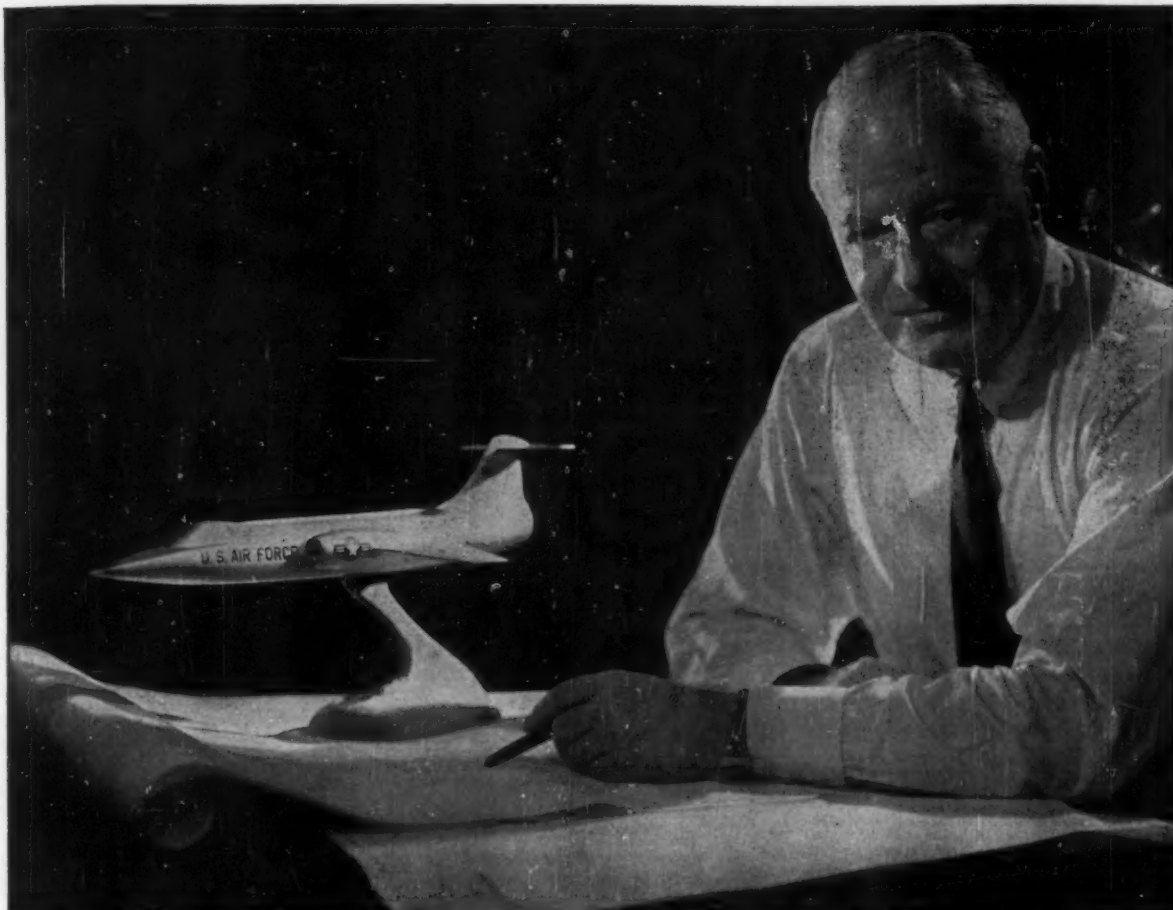


A Parallel Slide

Manufacturers' new orders continued to decline in October, dropping to \$26.3-billion after seasonal adjustment. That's the lowest level since April, 1955, and continues the downward

trend going on since June, with only a slight rise in July and August.

Sales also declined in October for the third month in a row reaching a low for the year. The seasonally adjusted



ROBERT E. GROSS

Portrait by Fabian Bachrach

34,500 Lockheed Employees Regularly Buy U.S. Savings Bonds

"We in the Lockheed Aircraft Corporation family are proud of our record of participation in the U.S. Treasury's Payroll Savings Plan.

"It is important . . . particularly in these times . . . for all Americans to support our nation's programs and policies in every way. I know of no better way than the regular purchase of Savings Bonds.

"Our records show Bond-buying employees are saving at the weekly rate of \$165,000 . . . a yearly total of approximately \$9,000,000.

"This thrift, practiced regularly, is a vital keystone in building family security. It also makes a significant contribution to stabilization of the purchasing power of the dollar and the prevention of inflation.

"Each of our new employees is given the opportunity to join his fellow workers in the Payroll Savings Plan. We feel this is an important step in insuring America's future security and prosperity."

**ROBERT E. GROSS, Chief Executive Officer,
Chairman of the Board,
Lockheed Aircraft Corporation**

A simple person-to-person canvass that puts a Payroll Savings Application Blank in the hands of *every* employee is all you have to do to install the Payroll Savings Plan or build employee participation in your present plan. Your State Sales Director is ready to help you. Write today to Savings Bond Division, U.S. Treasury Department, Washington 25, D. C.

The United States Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

The McGraw-Hill Publishing Company, Inc.



clues:

To The Solution of Management Men's Problems

Published: weekly—closes 12 days in advance.

Rate—\$10.15 per line (\$5.08 per line for position wanted ads), minimum 2 lines. Allow 5 average words as line; count 2 words for box number.

REPLIES (Box No.): Address to office nearest you
c/o This publication Classified Adv. Div.
NEW YORK: P. O. Box 18 (36)
CHICAGO: 150 N. Michigan Ave. (11)
SAN FRANCISCO: 68 Post St. (4)

EMPLOYMENT

Positions Wanted

Economist. Market Analyst. Executive. Writer. Age 42. High earnings. Consultant with wide business, trade ass'n & gov't experience in planning, forecasts, methods, statistics and systems. PW-6847, Business Week.

Attorney (34) with industrial traffic experience. Desires traffic position. PW-6814, Business Week.

SELLING OPPORTUNITIES

Selling Opportunity Offered

Sub Fractional H.P. Motor and Gear Motor Mfg. wants top sales Rep's. in South, Southwest and Western States. RW-6819, Business Week.

SPECIAL SERVICES

Cut Office \$ overhead! Free catalog! Write Accountants' Supply Co., 305 Canal St. N.Y. 13.

BUSINESS OPPORTUNITIES

Free Catalog. Contains hundreds of businesses, farms, and income properties throughout U.S., Canada. Specify type and location desired. Deal direct with owners. U.I. Buyers Digest, 1608 Hillhurst, Dept. BW-7, Los Angeles 27, Calif.

The Truth—if you are a \$5,000-to-\$20,000 investor you should have our free folder "What Is A Royalty?" for higher monthly income than is possible elsewhere. Address BW Operator, Room 724, Cooper Bldg., Denver 2, Colorado.

Profitable Exclusive Sales Franchise New Product. Beautiful, durable Aluminum Umbrella 7'4" diameter. For beaches, pools, hotels, motels, drive-ins, homes, institutions. Big profit margin. Investment in merchandise only. No franchise fee. Sun-Kween BW-2, P. O. Box 9530, Pittsburgh 23, Pa.

Estab. L. I. firm offers Hardgds. Warehousing & Cler. Serv. BO-6816, Business Week.

CAPITAL TO INVEST

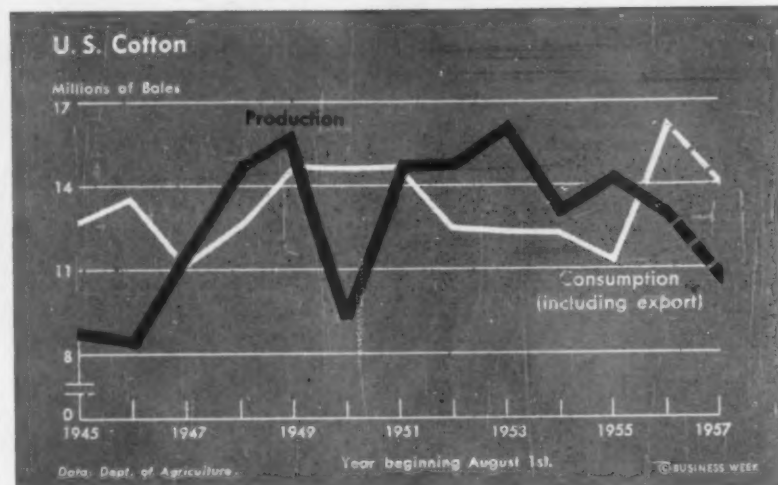
Commercial and Real Estate Financing. 1st & 2nd Mortgages, Construction Loans, Chattel Loans on Machinery, Equipment, Fixtures & Inventory. Sale & Leaseback. Present Financing Consolidated and increased-Payments Reduced. Receivable Discounting. Re-Discounting and Installment Financing. Long Term Subordinated Note and Debenture Financing. New Ventures Financed. Promotional Financing. U. S. & Canada. Sy Field Co., 1457 Broadway, New York, N. Y. WI 7-7395.

DON'T FORGET

the box number when answering advertisements. It is the only way we can identify the advertiser to whom you are writing.

figure for the month was \$28-billion. Sales, however, remained well above the level of new orders as they have all year long.

Inventories on Oct. 31 (at \$54.1-billion after seasonal adjustment) were high—only \$100-million below September and up \$2.3-billion from a year ago.

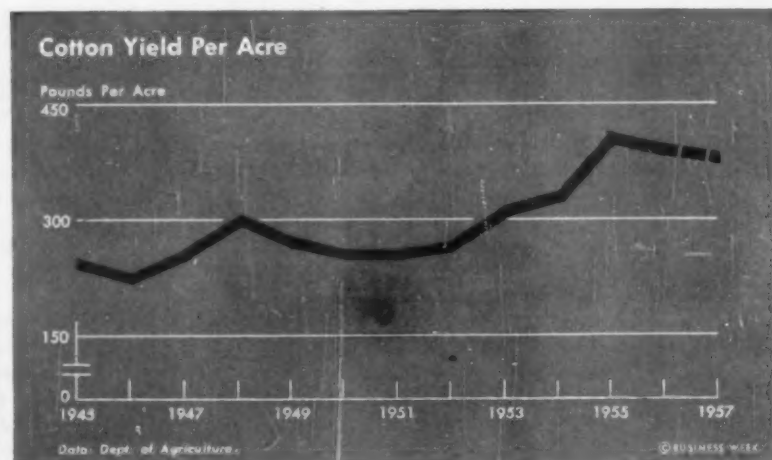


Small Crop, High Consumption

Government estimates last week placed the 1957 U.S. cotton crop at 11-million bales. That's almost 800,000 bales less than the Nov. 1 estimate, and 2.3-million bales less than last year's 13.3-million-bale crop.

Consumption of U.S. cotton at home and abroad jumped to 16.2-million bales in 1956, due to increased export demand. This year, consumption is ex-

pected to drop to 14.1-million, but will be larger than in any other year since 1951. Moreover, consumption should outpace production for the second year in a row, making a substantial dent in the heavy surplus. Predictions are that the carryover on Aug. 1, 1958, will drop to 9-million bales—down 5.5-million from the record high of 14.5-million on Aug. 1, 1956.



Bad Weather Takes Its Toll

The per-acre yield of the 1957 cotton crop will probably be about 390 lb. instead of the 413 lb. previously estimated. The yield was reduced by bad weather late in the season. Yields have

risen sharply since 1951, as farmers heaped on fertilizer and cultivated their most productive acres. An all-time high of 417 lb. per acre was set for the 1955 cotton crop.

ADVERTISERS IN THIS ISSUE

Index for Business Week December 21, 1957

THE ADVERTISING COUNCIL125

AIR MAZE CORP. 40
Agency—The Griswold-Ehlerman Co.

ALLEGHENY LUDLUM STEEL CORP. 85
Agency—W. S. Walker Adv., Inc.

ALLEN-BRADLEY CO. 25
Agency—The Fensholt Adv. Agency, Inc.

ALLIS-CHALMERS MFG. CO. 44
Agency—Compton Adv., Inc.

ALLISON DIV., GENERAL MOTORS CORP. 89
Agency—Kudner Agency, Inc.

ALUMINUM CO. OF AMERICA 98
Agency—Ketchum, MacLeod & Grove, Inc.

AMERICAN APPRAISAL CO. 77
Agency—The Buchan Co.

AMERICAN OPTICAL CO. 10
Agency—Sutherland-Abbott

AMERICAN WINDOW GLASS CO. 41
Agency—W. S. Walker Adv., Inc.

THE ANACONDA CO. 34
Agency—Kenyon & Eckhardt Inc.

THE BANK OF NEW YORK 29
Agency—Doremus & Co.

BANK OF NOVA SCOTIA 92
Agency—J. Walter Thompson Co., Ltd.

BENDIX AVIATION CORP. 36
Agency—MacLennan, John & Adams, Inc.

BUELL ENGINEERING CO. 104
Agency—Hicks & Groat, Inc.

BURROUGHS CORP. 4th Cover
Agency—Campbell-Ewald Co.

DECO STEEL 60
Agency—Charles O. Puffer Co.

CENTURY ELECTRIC CO. 75
Agency—Marsteller, Richard, Gebhardt & Reed, Inc.

CHASE BRASS & COPPER CO., INC. 54
Agency—Cunningham & Walsh, Inc.

CITIZENS & SOUTHERN NATIONAL BANK. 40
Agency—Burke Dowling Adams, Inc.

CLARAGE FAN CO. 50
Agency—McLain & Assoc.

CLUES (CLASSIFIED ADVERTISING).....125

COMBUSTION ENGINEERING, INC. 70
Agency—G. M. Basford Co.

CONVAIR, DIV. OF GENERAL DYNAMICS CORP. 3rd Cover
Agency—Buchanan & Co., Inc.

DELTA POWER TOOL DIV. (ROCKWELL MFG. CO.) 50
Agency—Marsteller, Richard, Gebhardt & Reed, Inc.

DIAMOND ALKALI CO. 33
Agency—Fuller & Smith & Ross, Inc.

ALLEN B. DU MONT LABORATORIES, INC. 62
Agency—Lescarbours Adv., Inc.

DUNHAM-BUSH, INC. 100
Agency—William Schaller Co., Inc.

ENJAY CO., INC. 95
Agency—McCann-Erickson, Inc.

FIRST NATIONAL CITY BANK OF NEW YORK 83
Agency—Batten, Barton, Durstine & Osborn, Inc.

FISHER GOVERNOR CO. 110
Agency—The Eiddle Co.

GARDNER DENVER CO. 9
Agency—The Buchan Co.

BAYLORD CONTAINER CORP., DIV. OF CROWN ZELLERBACH CORP. 72
Agency—French & Shields, Inc.

GENERAL AMERICAN TRANSPORTATION CORP. 43
Agency—Edward H. Weiss & Co.

GENERAL ELECTRIC CO. 90
Agency—G. M. Basford Co.

THE GLIDDEN CO. 59
Agency—Meldrum & Fowmth, Inc.

GUARANTY TRUST CO. OF NEW YORK 100
Agency—Albert Frank-Guenther Law, Inc.

THE HALOID CO. 115
Agency—Hutchins Adv. Co., Inc.

THE E. F. HAUSERMAN CO. 42
Agency—Meldrum & Fowmth, Inc.

HILTON HOTELS CORP. 13
Agency—Needham & Grohmann, Inc.

IDEAL CEMENT CO. 88
Agency—Hilpey, Henderson, Buckman & Co.

INTERNATIONAL NICKEL CO., INC. 27
Agency—Marchall & Pratt Div. of McCann-Erickson, Inc.

LIBERTY MUTUAL INSURANCE CO. 39
Agency—Batten, Barton, Durstine & Osborn, Inc.

P. R. MALLORY & CO., INC. 39
Agency—The Altkin-Kynett Co.

MANNING, MAXWELL & MOORE, INC. 94
Agency—Fuller & Smith & Ross, Inc.

MASSACHUSETTS INVESTORS TRUST 110
Agency—Doremus & Co.

METALS & CONTROLS CORP., SPENCER THERMOSTAT DIV. 124
Agency—Sutherland-Abbott

METROPOLITAN LIFE INS. CO. 14
Agency—Young & Rubicam, Inc.

MILWAUKEE DUSTLESS BRUSH CO. 124
Agency—Al Herr Adv. Agency, Inc.

MINNESOTA MINING & MFG. CO. 116
Agency—Batten, Barton, Durstine & Osborn, Inc.

NATIONAL INDUSTRIAL ADVERTISERS ASSN., INC. 111

NEW YORK LIFE INSURANCE CO. 81
Agency—Compton Adv., Inc.

NORFOLK & WESTERN RAILWAY CO. 103
Agency—Houck & Co., Inc.

PITTSBURGH COKE & CHEMICAL CO. 86
Agency—W. S. Walker Adv., Inc.

RADIO CORP. OF AMERICA, (COMM. ELECTRONIC PRODS.) 58
Agency—Al Paul Lefson Co., Inc.

RECORDAK CORP., (SUB. OF EASTMAN KODAK) 73
Agency—J. Walter Thompson Co.

REMINGTON RAND DIV. OF SPERRY RAND CORP. 4
Agency—Paris & Peart, Inc.

REG. DIV., THE WHITE MOTOR CO. 92
Agency—Zimmer, Keller & Calvert, Inc.

REPUBLIC STEEL CORP. 6-7
Agency—Meldrum & Fowmth, Inc.

REVOLVATOR CO. 110
Agency—Fredricks & Co., Inc.

ROCKWELL MFG. CO. 9
Agency—Marsteller, Richard, Gebhardt & Reed, Inc.

SHELL CHEMICAL CORP. 2nd Cover
Agency—J. Walter Thompson Co.

SIMPLEX WIRE & CABLE CO. 61
Agency—Henry A. Loudon Adv., Inc.

STONE & WEBSTER ENGINEERING CORP. 76
Agency—Harold Cabot & Co., Inc.

STRONBERG-CARLSON 107
Agency—The Rumrill Co., Inc.

STUDEBAKER-PACKARD CORP. 56
Agency—Burke Dowling Adams, Inc.

SYLVANIA ELECTRIC PRODUCTS, INC. 123
Agency—J. Walter Thompson Co.

TINNERMAN PRODUCTS, INC. 60
Agency—Meldrum & Fowmth, Inc.

TRANSAMERICAN FREIGHT LINES, INC. 40
Agency—Roy C. Hayes

TUBE TURNS 90
Agency—The Griswold-Ehlerman Co.

UNITED STATES RUBBER CO. 119
Agency—Fletcher D. Richards, Inc.

U. S. STEEL CORP. 40, 81
Agency—Batten, Barton, Durstine & Osborn, Inc.

UNIVERSAL OIL PRODS. CO. 112
Agency—Sam J. Gallay

VICTOR CHEMICAL WORKS 63-66
Agency—The Buchan Co.

WAGNER ELECTRIC CORP. 70
Agency—Arthur H. Morse, Inc.

WESTERN ELECTRIC CO. 3
Agency—Cunningham & Walsh, Inc.

S. S. WHITE DENTAL MFG. CO. 82
Agency—Hazard Adv. Co., Inc.

WORTHINGTON CORP. 93
Agency—Needham, Louis & Brorby, Inc.

ADVERTISING SALES STAFF

Midwestern Advertising Sales Manager
John P. Taylor—Chicago

Atlanta 3... Douglas C. Billian, 134 Peachtree St., N. W., Jackson 3-6951
Boston 16... Kent Sanger, Park Square Bldg., Hubbard 2-7169
Chicago 11... John F. Doomer, Herbert M. Higgins, James E. McShane, Robert Sidur, 530 N. Michigan Ave., Mohawk 4-5800
Cleveland 18... William C. Bradford, John G. Cashin, Hanna Bldg., Superior 1-7000
Dallas 2... Gordon L. Jones, Vantage Bldg., Riverside 7-5117
Denver 2... John W. Patton, Mile High Center, 1740 Broadway, Alpine 5-2981
Detroit 28... Richard J. McGork, C. C. Randolph, Penobscot Bldg., Woodward 2-1793
Los Angeles 17... Alfred L. Blesing, 1125 West Sixth St., Madison 6-2351
New York 56... Harold E. Chase, John H. Glover, G. Robert Griswold, John F. Jurashak, A. T. Ortle, John H. Sturman, 500 8th Avenue, Oxford 5-3358
Philadelphia 3... R. Bernard Alexander, David R. Conner, F. R. Robertson, Architects Bldg., 17th & Sanson Sts., Rittenhouse 6-6670
Pittsburgh 22... John H. Thomas, Henry W. Oliver Bldg., Atlantic 1-4765
St. Louis 6... James H. Cash, Continental Bldg., 2515 Olive St., Jefferson 5-4367
San Francisco 4... John W. Otterson, 65 Post St., Douglas 2-4609
England... Herbert Lagler, McGraw-Hill Co. Ltd., 95 Farringdon St., London, E. C. 6

Time to Start Stretching Out the Debt

When the Eisenhower Administration first took office, lengthening of the maturities of the national debt ranked as one of its primary objectives. It was—and still is—an objective worth achieving. Pushing out the maturity of the debt would not only relieve the Treasury of the embarrassment of continual refundings; it would be a step toward greater economic stability for the whole country.

Unfortunately, the Administration today is no nearer its goal than it was when it began. For the better part of the past three years, the bond market has been falling—reflecting the Federal Reserve's efforts to stave off inflation by making money tighter. It is next to impossible to fund a big floating debt on a falling market, and for a long time it looked as though the Treasury had given up trying.

Now, the bond market has turned up again. And there are signs that the new Secretary of the Treasury, Robert B. Anderson, intends to take advantage of this chance to stretch out his debt.

In each of the two refundings that Anderson has handled, he has included long-term offerings in exchange for short-term securities. The market has snapped up the long-terms on both occasions.

This doesn't mean that Anderson can sell anything he likes from here on. But it does mean that with skill and careful planning the Treasury can shift an appreciable portion of its huge floating debt onto a longer basis.

It is important that the Treasury should make the most of this chance. For the unbalanced structure of the federal debt is a constant threat to the stability of the whole economy. In times when inflationary pressures are running strong, the mass of short-term debt keeps a restrictive monetary policy from being fully effective. And in a time of business and financial stress, it increases the danger of a panic and a real monetary crisis.

There is a lot that we have to learn about debt management. But we will never learn it if we never try. Now is the time to start.

Pressure-Pointing

Under pressure from religious groups, the Census Bureau has decided not to ask Americans about their religion in the 1960 census. We think this is an extreme of bureaucratic timidity.

Certainly it seems to us there is little logic behind the decision. Those who objected had two reasons. They said, first, that it would violate the principle of separation of church and state. How a few anonymous statistics are going to change the position of either state or church, we fail to see.

Objectors said, secondly, that the question would violate the privacy of conscience. We have no hesi-

tation in requiring by law that people report the innermost details of their incomes, their occupations, their color and sex, and innumerable other personal matters. We simply can't believe that any good church member would have to search his soul before indicating his preference to a census taker.

We are concerned, though, by the way groups use their influence. The trick is to throw the weight of an organization with either a name or numbers behind it against someone or some organization—a government agency, part of the press, or a corporation—that is at the point of dealing with a sensitive issue, particularly something involving "public morals." It is done time after time to censor movies or to influence legislation. The result is to force the opinion of a minority onto the majority.

We're sorry that the Census Bureau gave in on this one; it will encourage the pressure-pointers.

Calling the Shots

Much of the news in the past few weeks has not made pleasant reading for businessmen. Production has dropped; unemployment has risen; capital spending has turned down; profits in an increasing number of cases have been disappointing. The news, in short, has been precisely the kind of news that develops in the early stages of a mild recession.

Along with the rest of the nation's press, BUSINESS WEEK has reported all these developments. Indeed, it anticipated most of them.

As a result, we are sometimes taken to task these days for "talking business down," or for sapping the foundations of business confidence.

The implication of these reproaches is that if everyone just keeps on talking happy talk, business will keep growing continually like an ever-expanding smile. This is bad economics and worse journalism.

The nation's press, including BUSINESS WEEK, has a job to do, and that job is not to create a dream world. It is to report accurately, conscientiously, and perceptively what is going on.

It is every bit as bad for a responsible journal to try to talk business up as to talk it down. For in the long run, either is a fraud on the readers. The U. S. economy can operate only if the thousands and millions of people who make decisions every day have the very best information to act on—whether that information involves a slowdown in business, or a Sputnik circling overhead, or the fact that there are only so many days left until Christmas.

We don't underrate the importance of confidence in the business picture. But we have no use for the kind of confidence that comes from eating opium. The U. S. had a sample of that back in 1929. We don't think anybody wants to try it again.



Convair's Supersonic Deltas... B-58, F102A, F106

KEYSTONES OF AMERICAN AIR POWER

Convair, by developing and perfecting delta-wing aircraft, has provided significant new keystones of capability for both the Strategic and Defense missions of the U.S. Air Force.

America's first supersonic Bomber, the B-58, was developed and is being built at CONVAIR-FORT WORTH for the Strategic Air Command. America's first supersonic, all-weather Interceptor, the F-102A, and its advanced successor the F-106 were designed and are being built at CONVAIR-SAN DIEGO for the Air Defense Command.

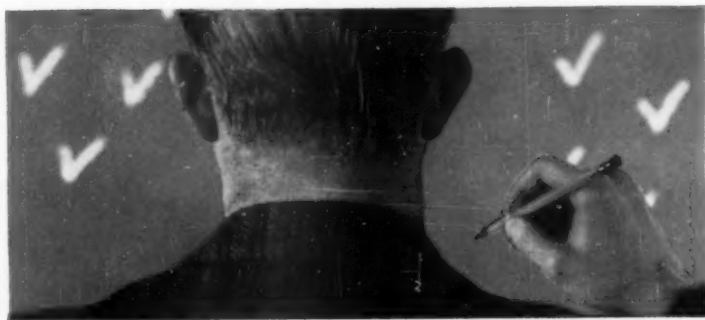
CONVAIR A DIVISION OF GENERAL DYNAMICS CORPORATION



The world's fastest multiplier...



the world's fastest typist...



and the world's fastest checker

couldn't put bills out
as fast as the
Burroughs
Miracle Multiplier



World's Fastest Billing Machine

The Burroughs Miracle Multiplier eliminates two out of three billing steps by:

1. *Computing and typing a complete invoice in one easy operation.*
2. *Computing by direct multiplication—much faster than by repeated addition.*
3. *Printing price and amount side by side simultaneously. No need for checking entries and calculations—proof is automatic.*

Do you need faster billing? See a demonstration at our branch office. Or write Burroughs Corporation, Detroit 32, Michigan.



"Burroughs"—Reg. TM.